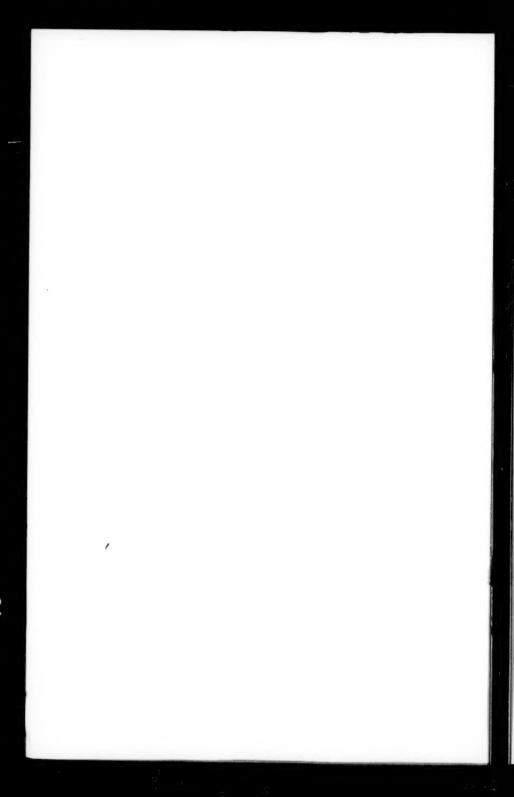
# ASCE ANNUAL COMBINED INDEX

1992



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# **FOREWORD**

The 1992 ASCE Annual Combined Index provides a guide to material appearing in publications of the American Society of Civil Engineers published during 1992. This includes papers and technical notes from ASCE technical and professional journals, feature and news articles from Civil Engineering—ASCE, Manuals and Reports on Engineering Practice, books, and conference papers appearing in conference publications.

In the subject index, the user will find all articles and papers dealing with specific subject areas listed under one or more appropriate subject headings suggested by the con-

tent and application of the paper.

The author index contains entries indexed under the names of editors, authors, co-authors, discussers, and committees or task forces preparing reports. Also in the author index, entries are supplemented with information concerning discussions, errata, and closures, if any. (If there is more than one author for the original paper, this supplementary information is given with the entry for the primary author.) To find what discussion, if any, there has been for a paper or article located in the subject index, the user should look under the entry for the first named author of the paper. When a paper from a prior year is discussed, entries for the original paper are repeated in this Index.

See next page for sample entries and explanations.

# Sample subject index entries

# For journal papers, technical notes, and magazine articles

- Variations in Measured Resilient Modulus of Asphalt Mixes, <sup>2</sup>Faisal H. Al-Sugair and Jamal A. Almudaiheem, 3MT 4Nov. 92, 5p343-352.
- 1. Title of paper. 2. Author(s). 3. Journal code. 4. Month and year of publication. 5. Pagi-

# For conference papers appearing in special publications

- Electric Arc Furnace (EAF) Slag as an Aggregate in Asphalt Concrete, <sup>2</sup>Kit M. Lum, Yilk-Diew Wong and Soo-Loi See, 3(Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), 4p240-249.
- 1. Title of paper. 2. Author(s). 3. Title, editor and year of publication of book. 4. Pagination

# For special publication (books)

- <sup>1</sup>Coastal Engineering Practice '92, <sup>2</sup>Steven A. Hughes, ed., <sup>3</sup>1992, <sup>4</sup>0-87262-866-3, <sup>5</sup>1100pp.
- Title of book. 2. Author, editor, or corporate author. 3. Year of publication. 4. ISBN. 5. Pagination.

## Sample author index entry showing notes for discussion

- Fenske, T. E.
- 2Need for "Professional" Education for Professional Engineers, with S. M. Fenske, El Oct. 90, <sup>5</sup>p345-350
  - 6disc: Robert A. Green, El July 92, p324-326
  - clo: El July 92, p326-327.
- Author's name. 2. Title of paper. 3. Journal code. 4. Month and year of journal. 5. Pagination. 6. Discussion note including author(s) of discussion, journal issue, and pagination.

  7. Closure note including journal issue and pagination.

### Abbreviations used in this index

disc-discussion

err - errata

clo-closure

ltr-letter to the editor which does not refer to a previously published article

ed-editor

### **Journal Codes**

- AS Journal of Aerospace Engineering
- CE Civil Engineering-ASCE
- CC Computing Review Newsletter
- CF Journal of Performance of Constructed Facilities
- CO Journal of Construction Engineering and Management
- CP Journal of Computing in Civil Engineering
- CR Journal of Cold Regions Engineering
- EE Journal of Environmental Engineering
- El Journal of Professional Issues in Engineering **Education and Practice**
- EM Journal of Engineering Mechanics
- EY Journal of Energy Engineering GT Journal of Geotechnical Engineering

- HY Journal of Hydraulic Engineering
- IR Journal of Irrigation and Drainage Engineering
- ME Journal of Management Engineering
- MT Journal of Materials in Civil Engineering
- NE ASCE News
- ST Journal of Structural Engineering SU Journal of Surveying Engineering
- TE Journal of Transportation Engineering
- UP Journal of Urban Planning and Development
- WR Journal of Water Resources Planning and
- Management
- WW Journal of Waterway, Port, Coastal and Ocean Engineering

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p1547-i565.

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Traffic Impact Study for a Regional Shopping Center at a Basque City. A European View, Mikel Murga. (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.84-88.

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ethod for Preevaluation and Selection of Road Projects in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-

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60. ALWP-67: A Little-Known Big Nuclear Accident, N. G. Botov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2331-2338.
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Structural Control Design in the Presence of Time De-lays, P. M. Sain, B. F. Spencer, Jr., M. K. Sain and J. Suhardjo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815.

Time-Delay Effect on Dynamic Response of Actively Controlled Structures, Surjit S. Dhillon and William C. Lennox, AS Oct. 92, p450-464.

Vibration Control of Highway Bridge Under Earth-quakes, Zhikun Hou and Gongkang Fu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p176-179.

Active earth pressure
Interslice Force Functions for Limit Equilibrium Analsis, Harianto Rahardjo, Delwyn G. Fredlund and Ke K. Fan, (Stability and Performance of Slopes and Enbankments II, Raymond B. Seed, ed. and Ross V. Boulanger, ed., 1992), p325-341.

Adaptive systems

Adaptive and Parallel Methods for Nonlinear Solid Mechanics, T. Belytschko, L. P. Bindeman, H. Y. Chiang, E. J. Plaskacz and I. S. Yeh, (Enjineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992). -278. 1992), p27-41.

1992), p27-41. Adaptive Control of Ground-Water Hydraulics, LaDon Jones, WR Jan.Feb. 92, p1-17. Adaptive Parameter Estimation for Multisite Hydrologic Forecasting, Haitham M. Awwad and Juan B. Valdés, HY Sept. 92, p1201-1221. Control of Contaminant Transport in Estuaries, Nikolaos D. Katopodes, (Estuarine and Coastal Modeling, Maicolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p370-381.
Recent Findings in Active Structural Control, Craig A. Rogers, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p824-827.

and John M. Niedzwecki, ed., 1992), p824-827.

Adhesives bonding

Adhesives and Structural Plastics, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571.

Design Considerations for Using Adhesives in Shear Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

Effects of Bonding Stiffness on Thermal Stresses in Sandwich Panels, R. Husscin, P. Fazio and K. Ha, AS Oct. 92, p480-490.

In-Place Shear Testine of Tile. Arthur P. Reed. Bruce A.

12., p480-490.

In-Place Shear Testing of Tile, Arthur P. Reed, Bruce A. Suprenant and Jim Acri, MT Aug. 92., p264-274.

Investigation of Zebra Mussel Adhesion Strength Using a Rotating Disk, Josef Daniel Ackerman, C. Ross Ethier, D. Grant Allen and Jan K. Spelt, EE Sept./Oct. 92, p708-724.

Road Aggregate Choice Based on Silicate Quality and Bi-tumen Adhesion, Petri V. Peltonen, TE Jan./Feb. 92, p50-61.

Torsional Stresses in Tubular Lap Joints with Tapered Adherends, D. Chen and S. Cheng, EM Sept. 92, p1962-1973.

Adjustment
Correction Criteria of Finite Element Modeling in Struc-tural Dynamics, M. Tong, Z. Liang and G. C. Lee, EM Apr. 92, p663-682.

Admixtures

Adding Up Admixtures, Paul Tarricone, CE May 92, p48-51.

p48-51.

Concreting at Subfreezing Temperatures, Charles J.

Korhonen, Edel R. Cortez and Brian A. Charest, (Matrials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p382-397.

The Effects of Fillers and Admixtures on Grout Performance, Sandra Z. Tosca and Jeffrey C. Evans, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), v337-246.

p337-349.

p331-392.
Fundamental Observations on Cement Based Grouts (1):
Traditional Materials, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, (Grouting, Soil Improvement and Geoxynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p474-485.

Fundamental Observations on Cement Based Grouts (2):

Fundamental Observations on Cement Based Grouts (2):
Microfine Cements and The Cemill® Process, B. De
Paoli, B. Bosco, R. Granata and D. A. Bruce, Grouting,
Soil Improvement and Geosynthetics, Roy H. Borden,
ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

Mix Design for Flowable Fly-Ash Backfill Material, R. Janardhanam, F. Burns and R. D. Peindl, MT Aug. 92,

p252-263.

Properties of Cement Grouts and Grouted Sands with Additives, C. Vipulanandan and S. Shenoy, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p500-511.

Put to the Test, Paul Tourney and Neal Berke, CE Dec. 92, p62-63.

Review and Evaluation of the Use of Microsilica as an Admixture in Concrete, Brett Gunnink and Fahad Alnowaiser, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p92-103.

Rheological Properties of Microfine Cement Grouts with Additives, Ulf Håkansson, Lars Hässler and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p551-563.

Stabilized Active Clay by Sand Admixture, Pat T. Leelani, Maen M. Shaar and Phil V. Compton, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1042-1053.

Strength and Corrosion Resistance of Superplasticized

Strength and Corrosion Resistance of Superplasticized Concretes, Mohammed Maslehuddin, Rasheeduzzafar and Abdulaziz Ibrahim Al-Mana, MT Feb. 92, p108-

Adsorption

Atrazine Biodegradation in Biological GAC Columns, M.

K. Banks and C. M. Huang, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p516-519.

Finite Element Modeling of Single-Solute Activated-Carbon Adsorption, M. Akram Hossain and David R. Yonge, EE Mar./Apr. 92, p238-252.

Improved Performance of Activated Sludge with Addition of Inorganic Solids, Robert B. Bowen and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p474-479.

Modeling of Toxic Wastewater Treatment by Expanded-

Linaweaver, ed., 1992), p474-479.
Modeling of Toxic Wastewater Treatment by Expanded-Bed Anaerobic GAC Reactors, G. F. Nakhla and M. T. Suidan, EE July/Aug. 92, p495-512.

A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2,4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, P. S. Ho and W. F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p364-369.
Road Aggregate Choice Based on Silicate Quality and Bitumen Adhesion, Petri V. Peltonen, TE Jan/Feb. 92, p50-61.

p50-61.

Wave Front Behavior in Adsorption Reactors, Federico Vagliasindi and David W. Hendricks, EE July/Aug. 92, p530-550.

Advection

Benthic Exchange of Toxic Contaminants, Steve C.

McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p386.

Circulation Modelling and Water Quality Prediction, Hans Jacob Vested, Ole Knill Jensen, Ann Christina Ellegaard, Hanne Karin Bach and Erik Koch Rasmussen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Kesth Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p317-331.

Hydrodynamics for Water Quality Models, Mark Dortch

Hydrodynamics for Water Quality Models, Mark Dortch and Billy Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p145-

190.
Plume Movement and Mixing in Heterogeneous Aquifer, Salwa Rashad, John Hoopes, Craig Fergusson and Tswn-Syau Tsay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p180-195.

Taylor-Galerkin Method for Wind Wave Propagation, H. S. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p87-90.

and John M. Niedzwecki, ed., 1992), p87-90. Three-Dimensional Eulerian-Lagrangian Transport Model, A. K. M. Quamrul Ahsan and M. S. Bruno, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p1-12. Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraulic Engineering: Saving a Threatemed Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.

Aeration at Ohio River Basin Navigation Dams, Steven F. Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens and George H. Taylor, EE Mar./Apr. 90, p361-375.

Acration Using the Howell-Bunger Valve, D. D. Kraus and E. R. Hixson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p299-304.

Celanese Wastewater Treatment Plant Upgrade, William R. Gluck, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p281-286.

Linaweaver, ed., 1992), p281-286.
Chlorination/Dechlorination and Post Aeration Key Operating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p623-627.
Dynamic Modeling of VOC Emissions in HPO Process, Chwen-Jeng Tzeng, Roger W. Babcock, Jr., Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p67-72.
Estimatine VOC Emission Rates in Aeration Systems.

STATIONS, F. FISTCE LIBRAUET, Ed., 1992), p67-72. Estimating VOC Emission Rates in Aeration Systems, Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p73-78.

Evaluation of BAT for VOCs in Drinking Water, Robert M. Clark and Jeffrey Q. Adams, EE Mar./Apr. 91, p247-268.

p.24)-206.
Gas Phase Control for Oxygen-Activated Sludge, R. C. Clifff, EE May/June 92, p.390-401.
Gas Transfer in Diffused Bubble Plumes, Steven C. Wilhelms and Sandra K. Martin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p317-322.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Pierce Linaweaver, ed., 1972, process.
Multi-Stage Driftused Bubble Aeration System for the Removal of Volatile Organics and Radon, a Case History,
A. David Marino and Jerry Lowry, (Environmental Engineering; Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p581-586.

Numerical Prediction of Aeration in Hydroturbine Draft Tubes, M. Naghash and C. Bohac, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p293-298.

Toward a Low-Emissions Wastewater Treatment Plant, Albert B. Pincince, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl.-6. Uniform Aerated Chute Flow, Willi H. Hager, HY Apr.

91, p528-533. Waterfall Aeration Works, Renso Gasparotto, CE Oct. 92, p52-54.

Numerical and Physical Modeling of Air Diffuser Plume, D. W. Machina, J. A. McCorquodale and J. K. Bewtra, EE Mar./Apr. 92, p253-267.

Air Entrainment by Spillway Aerators, Peter Rutschmann and Willi H. Hager, HY June 90, p765-782.

Aerial photography Application of Extremely Low Altitude Photogrammetry for Monitoring Coastal Structures, Richard B. Davis and Thomas R. Kendall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p892–897.
GPS/Positioned Digital Video for Airborne GIS Data Acquisition, Brent Wanless, SU Aug. 92, p80–89.

Comparison of Dispersion Models for Wastewater Treat-ment Emissions, Jin-Sheng Lin and Lynn M. Hid-demann, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11.

Treatability Study on the Biological Treatment of Land-fill Leachate and Gas Condensate, Bill Y. Liu, Alan Y. Li and James F. Urek, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p405-410.

F. Pierce Linaweaver, ed., 1992), p405-410.

Aerodynamic forces

Modeling and Analysis of Doubly Curved Aerobrake

Truss Structures, Gregory Washington and Eric Klang,

(Engineering, Construction, and Operations in Space

III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.

Miller, ed., 1992), p33-344.

A Novel Aerobrake Design for a Mars Lander, John E.

Crawford, Ralph G. Colbert and Manual I. Cruz, (Engineering, Construction, and Operations in Space III,

Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.

Miller, ed., 1992), p862-872.

On-Orbit Assembly of Large Space Structures: A Mars

Miller, ed., 1992), p862-872.
On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mcck-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Fillatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.
Structural Considerations in the Design of a Mars Mission Aerobrake, John Hairr and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p873-884.
Structural Studies of Two Aerobrake Heatshield Panel Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932.

nalytical Aerodynamic Investigation of Cable-Stayed Helgeland Bridge, Imre Kovacs, Holger S. Svensson and Elljarn Jordet, ST Jan. 92, p147-168.

and Etljarn Jordet, 31 Jan. 32, p147-106.

Effect of Thickness Distribution on Performance of S-Cambered Profiles, Baby Chacko, V. Balabaskaran, E. G. Tulapurkars and P. A. Aswathanarayana, EY Dec. 92, p164-179.

Probabilistic Description of Buffeting Response of Long-Span Bridges, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2401-2420.

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441.

Bucher, EM Dec. 94, p2421-2441.

Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.

Wind Cross-Spectrum Effects on Long-Span Bridges, N. P. Jones, A. Jain and R. H. Scanlan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p63-66.

Aerosols
On the Particle Size Distribution of Crushed Spent Fuel,
P. C. Reardon, Y. R. Rashid and G. S. Brown, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p137-142.

Aerospace eagineering
The Army Aviation Team from a Military Civil Engineer's Perspective, Paige E. Johnson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p72-108.

Impact Craters on Cosmic Dust: Do Damage to the Spacecraft, Hanchang Peng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p969-974.

974.
The National Aero-Space Plane Program—A Revolutionary Concept, Robert R. Barthelemy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2382-2391.
Space Education Day, D. O. Swint, M. E. McGuinness, W. R. Sharp, S. K. Swint, J. T. Curry, B. D. Bryant, L. A. Willar and S. Solari, Egineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160.

Aerospace Industry

A New Era in Space Operations, Simon P. Worden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

A Novel University-Industry-Government Partnership, Constantine N. Papadakis, Paul C. Claspy, Theo G. Keith and Michael J. Salkind, Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2128-2135.

Space Civil Engineering Option—A Progress Report, Marvin E. Criswell and Willy Z. Sadeh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2136-2146.

Aerospace transport

The Affordable Space Platform: The STS External Tank,
Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p945-956.

Architectures for Mission Control at the Jet Propulsion Laboratory, Roger A. Davidson and Susan C. Murphy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1567-1578.

Miller, ed., 1992), p1567-1578.
Assessment of a SSF Servicing Facility, Rohan Zaveri, Scott Geels, Erlinda Kiefel, Dan Uhiig and Benton Clark, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1668-1679.
Back to the Future: A Saturn V-Based Low Earth Orbital Transportation Node, Thomas J. Frieling, (Engineering, Construction, and Operations in Space III), Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 947-968. Sadeh, ed., Stein 1992), p957-968.

Cargo Transport to the Lunar Surface Using a Three Rotor Sling, Brian Tillotson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1010-1021.

Characterization of Emplacement Strategies for Lunar and Mars Missions, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1631-1644.

ESCAPE: Small Payload Strategies, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1542-1545.

A Facility for Training Space Station Astronauts, Ankur R. Hajare and James R. Schmidt, Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1645-1655.

p1043-1033.
The Initial Exploration of Mars: Rationale for a Return Mission to Chryse Planitia and the Viking 1 Lander, Robert A. Craddock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1488-1499.
Lunar Transit Telescope Lander Design, Hussam A. Omar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1880-1889.

Mars Basing, Brent Sherwood, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1964-1975.

p1904-1973.
On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.
On Orbit Reposition Assembly and Constraints of a Nucle.

Russell J. Miller, ed., 1992, psys-1009.
On-Orbit Robotics Assembly and Operations of a Nuclear Mars Transfer System, W. J. G. Brimley, H. Kleinberg and H. H. Woo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1413-1422.

An Operational Evaluation Process for Long-Duration Mission Habitats in Space, M. Novara, E. Raffner and D. Antonelli, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Orbital Construction of a NTR Mars Transfer Vehicle, Steve Jolly, Mike Loucks and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sade, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p987-998.

Pressure Suit Requirements for Moon and Mars EVA's, Eric M. Jones and Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1701-1708.

1992), p1/01-1708.
Robotic On-Orbit Fueling of SEI Vehicles, Margaret M.
Clarke, David E. Haines and A. J. Mauceri, (Engineering, Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p1423-1433.

17923, p1423-1433.
Rocket Fuel to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2271-2281.

Ropeway Material Handling Systems for Lunar Mining Sites, H. Peter Huttelmaier and Jonathan R. Carrick, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1116-1126.

Miller, ed., 1992), p1116-1126.
System Concepts for a Series of Lunar Optical Telescopes, Max E. Nein, Billy G. Davis and John D. Hilchey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831.

Towards a Spacefaring Civilization, Gordon R. Wood-cock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2008-2022.

Affirmative action

Minority, Women and Small Contractors Boosted in NYC, CE June 92, p22,24.

Providing Lead Role in Work-Force Diversity, Robert E. Wolfe and Marie E. Anspach, El Jan. 92, p38-48.

U.S. Army Corps of Engineers and Afghanistan's High-ways 1960-1967, Frank N. Schubert, CO Sept. 91,

Evapotranspiration in Sudan Gezira Irrigation Scheme, Ahmed S. A. Hussein and Ahmed K. El Daw, IR Nov./ Dec. 89, p1018-1033.

Problems and Potential of Irrigated Agriculture in Sub-Saharan Africa, Mahmood Alam, IR Mar./Apr. 91, p155-172.

Age factors

Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1055-1068.

Review of NPP Concrete Degradation Factors and As-sessment Methods, T. M. Refai and M. K. Lim, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p182-193.

Aggradation-Degradation Process in Alluvial Channels, Chin-lien Yen, Shou-young Chang and Hong-Yuan Lee, HY Dec. 92, p1651-1669.

Channel Restoration Above Elephant Butte Reservoir, Christopher A. Gorbach, (Hydraulic Engineering: Sa-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 14-119.

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertainties of Sediment Transport Parameters, Carlos C. Carlaga and Larry W. Mays, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p526-531.

The Upstream Zone in Concrete-Face Rockfill Dams, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p470-493.

Aggregates
Backfill-Stiffened Foundation Wall Construction, Robert
Nicholls, (Utilization of Waste Materials in Civil Engineering Construction, Bilary 1. Inyang, ed. and Kenneth
L. Bergeson, ed., 1992), p286-295.
Creep Recovery of Prepacked Aggregate Concrete, Abu S.
M. Abdul Awal, MT Aug. 92, p320-325.

Electric Arc Furnace (EAF) Slag as an Aggregate in Asphalt Concrete, Kit M. Lurn, Yiik-Diew Wong and Soo-Loi See, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p240-249.

Evaluation of Fine Aggregate Particle Shape and Texture, E. R. Brown, P. S. Kandhal and James W. Winford, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p216-230.

Factors Controlling Properties and Durability of Concretionary Laterite Gravel Aggregates, Enuvie G. Akpokodje and Peter P. Hudec, MT Feb. 92, p58-70.

pokodje and Peter P. Hudec, MT Feb. 92, p58-70.
A feasibility study for a Concrete Core Tomographer, A.
M. Abdel-Ghaffar, R. M. Leahy, S. F. Masri and C. E.
Synolakis, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein
Sture, ed., 1992), p37-48.
Fracture Analysis of Mortar-Aggregate Interfaces in Concrete, Kwang Myong Lee, Oral Buyukozturk and Ayad
Oumera, EM Oct. 92, p2031-2047.
Mixed Broken Glass Processing Solutions, Nathiel G.
Egosi, (Utilization of Waste Materials in Civil Engimeering Construction, Hilary I. Inyang, ed. and Kenneth
L. Bergeson, ed., 1992), p71-80.
MSW Inciparator Ash as Aggregate in Concrete and Ma-

MSW Incinerator Ash as Aggregate in Concrete and Masonry, Rosmadi Abdul Rashid and Gregory C. Frantz, MT Nov. 92, p353-368.

M I Nov. 94, p.333-308. Neutralysis: Lightweight Aggregate and Recycling, Robert S. Merdes, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergson, ed., 1992), p81-91. Overlays on Deck, Paul Tarricone, CE Sept. 92, p42-45. Overview of Permeable Bases, Robert H. Baumgardner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p275-287.

Passive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Con-cretes, Michael A. Taylor, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl-12.

anu stein sture, ed., 1992.), p1-12.
Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, Kwang W. Kim, Bong H. Lee, Je-Seon Park and Young S. Doh, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-344.

Procedures for Evaluating Aggregate Gradation Specifica-tions, Edwin C. Novak, Ir., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p.261-274.

White, ed., 1992), p261-274.
 Properties of Aggregate-Cement Interface for High Performance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p852-855.
 RCC Mixes and Properties Using Poor Quality Materials-Concepcion Dam, L. Gaekel and E. Schrader, (Rollier Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p358-373.
 RCC Test Specimes Properties To. Developments To.

CC Test Specimen Preparation—Developments Toward a Standard Method, Terrence E. Arnold, Theodore B. Feldsher and Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p341-357. RCC

Realistic Specifications for Manufactured Sand, Charles R. Marck, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p245-260.

Reliability-Based Design for Feeeze-Thaw Concrete, I. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9462-475.

Road Aggregate Choice Based on Silicate Quality and Bi-tumen Adhesion, Petri V. Peltonen, TE Jan./Feb. 92,

p50-61.

Roller Compacted Concrete Mix Design, Stephen Tatro and James K. Hinds, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p323-340.

Scrap Tires Used in Rubber-Modified Asphalt Pavement and Civil Engineering Applications, Michael Blumenthal and Joseph L. Zelibor, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p182-192.

A Study on the Utilization of Incinerator Residue for Asphalt Concrete, Kit M. Lum and Joo-Hwa Tay, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p217-229.

The Use of Phosphogypsum-Based Slag Aggregate in Hot Mix Asphaltic Concrete, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p202-216.

Bergeson, ed., 1992), p.202-216.

Aging
Comprehensive Regional Socioeconomic Simulation System, Gwan Kim, Pyong Sik Pak and Yutaka Suzuki,
UP Sept. 92, p.81-96.
The Mechanical Aging of Soils, John H. Schmertmann,
GT Sept. 91, p.1288-1330.
Review of NPP Concrete Degradation Factors and Assessment Methods, T. M. Refai and M. K. Lim, (Non-destructive Testing of Concrete Elements and Structures, Farthad Ansari, ed. and Stein Sture, ed., 1992),
p.182-193.

Roof Management Alternatives for Aging Launch Infra

Roof Management Alternatives for Aging Launch Infrastructure, Dennis Firman, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2056-2063. Simulated Field Trials of Non-Destructive Concrete Test Methods for Highway Structures, John A. Bickley and Paul Read, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p162-170.

Time-Dependent Cone Penetration Resistance Due to Blasting, Wayne A. Charlie, Mutabihirwa F. J. Rwebyogo and Donald O. Doehring, GT Aug. 92, p1200-1215.

Agreements
A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, K. Branch, N. Coburn, G. Curtis, J. Holm and S. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p156-160.

Inderstanding the High-Level Radioactive Waste Pro-

1992), p136-160. Understanding the High-Level Radioactive Waste Program Through the Cooperative Agreement Process, L. Cheryl Runyon, Millard Peck, III. and Glenn H. Gardner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p152-155.

gricultural economics roblems and Potential of Irrigated Agriculture in Sub-Saharan Africa, Mahmood Alam, IR Mar/Apr. 91,

Agricultural engineering Environmental Impacts of Agricultural Drainage, R. W. Skaggs, M. A. Breve and J. W. Gilliam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1922), p19-24.

Solutions, Ted Engman, ed., 1992), p19-24.

Agricultural wastes

Agricultural impacts on Surface Water via Ground
Water, William L. Magette, Adel Shirmohammadi,
James D. Wood and Theodore H. Ifft, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p407-412.

Assessing the Leaching Potential of Herbicides at the
Ohio MSEA, S. R. Workman, A. D. Ward and W. G.
Knisel, (Irrigation and Drainage: Saving a Threatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), p413-418.

Importance of ET on Colorado River Water Quality,
Kenneth A. Pitney, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted Engman,
ed., 1992), p171-176.

man, ed., 1992), p171-176.

Agricultural watersheds

Estimating Peak Flows from Small Agricultural Watersheds, James V. Bonta and A. Ramachandra Rao, IR

Jan./Feb. 92, p122-137.

Linking GIS with Hydrologic Modeling, Barry Evans, Jefferey Grimm, Larry Thornton and Paul Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), 9499-504.

Loading of Nutrients to Groundwater From High Source Areas During the Winter Period, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p573-578.

Non-Point Source Pollution Due to Runoff Over Sandy Soil, D. Payne, C. Richardson, A. D. Parr and K. Janish, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1929, p439-444.

Linaweaver, ed., 1992, pp. 39-444.
Pilot-scale Anaerobic Biological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapil Sabharwal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450.

Winter Nutrient Losses to Groundwater Associated with Various Tillage Manure Systems, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p367-572.

Agricultural Option Contracts, John F. Scott, (Waser Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl 38-143.

Alkaline Sludge Stabilization: A "Quick Fix" and Long Term Sludge Management Option for Burlington, North Carolina, Stephen R. Shoaf, Morris V. Brookhart and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p399-404.

Alternative Methods of Drainage Management in San Joaquin Valley, California, S. Alireza Taghavi and Ben Everett, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337.

Applications of Remote Sensing to Irrigated Agriculture, Christopher M. U. Neale and Richard H. Cuenca, (Irri-gation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p54-

Section 2. Section 2.

Darcy-Weisbach Roughness Coefficients for Selected Residue Materials, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p481-486.

Engman, ed., 1992), p481-486.

A Decision Support System for Water Quality Modeling, D. S. Yakowitz, L. J. Lane, J. J. Stone, P. Heilman and R. K. Reddy, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p188-193. Greenhouse Irrigation Technology Transfer in Spain, Elias Fereres, Francisco Orgaz, Nicolas Castilla and Jose Lopez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p215-220.

ct., 1972, D27-220.
An Interagency Program to Improve Irrigated Agriculture, A. R. Dedrick, W. Clyma, A. J. Clemmens, R. D. Gibson, J. A. Replogle, R. E. Ware, P. N. Wilson and D. B. Levine, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600.

Management of Agricultural Drainage Pollution Considering Regional Cooperation, T. C. Lyons and M. E. Grismer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p448-455.

Modeling Nutrient Loadings from Croplands in the Chesapeake Bay Watershed, Anthony S. Donigian, Jr. and Avinash S. Patwardhan, (Water Resources Planning and Management Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

pol 1-622.

Predicting Water Demand in Agricultural Regions Using Time Series Forecasts of Reference Crop Evapotranspiration, John C. Tracy, Miguel A. Mariño and S. Alireza Taghavi, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p50-55.

Simulation of Two Approaches to Curb Potential Buildup of Nitrates in Groundwater, D. Adelman, S. Zheng and M. F. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p611-616.
 Solid Waste Management: The Extension Service Initiative, M. F. Dahab and W. E. Woldt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-348.

548.
Water Availability and Water Demand Study for the Citanduy River Basin, West and Central Java, Indonesia, R. Joseph Bergquist and Ed A. Toms, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p328-331.
Water Pricing Policy in the United States: Task Committee Report, Task Committee on Water Pricing Policy, (Neil S. Grigg, chmn.), (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p536-641.

p636-641

post-0-91. Water Quality Implications of Encapsulated Atrazine, Adel Shirmohammadi, Timothy J. Gish and Raviraj Vyravipillai, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p425-430.

Air classifiers
Controlling Pulsed Incompressible Flow, Richard Ian
Stessel, EY Apr. 92, p1-17.

Stessel, EY Apr. 92, pl-17.

Air estralament
Air Entrainment by Spillway Aerators, Peter Rutschmann
and Willi H. Hager, HY June 90, p765-782.

Durability of MSW Fly-Ash Concrete, James R. Triano
and Gregory C. Frantz, MT Nov. 92, p369-384.

Protected-Paste Volume of Air-Entrained Cement Paste.
Part 1, K. Natesaiyer, K. C. Hover and K. A. Snyder,
MT May 92, p166-184.

Santa Cruz Dam Modification, Megan Metcalf, Timothy
P. Dolen and Paul A. Hendricks, (Roller Compacted
Concrete III, Kenneth D. Hansen, ed. and Francis G.
McLean, ed., 1992), p459-475.

Uniform Aerated Chute Flow, Willi H. Hager, HY Apr.
91, p528-533.

91, p528-533.

Vortex Suppression in Wet-Pit Pump Intakes, Tatsuaki Nakato, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p478-481.

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

Air Force
Military Leaders and Civil Engineers—An Air Force
Academy Challenge, J. L. Brickell, K. J. Knox, B. L.
Miller and B. D. Bryant, El July 92, p240-249.

Air pollution California's Tradable Emissions Policy and Greenhouse Gas Control, John P. Dwyer, EY Aug. 92, p59-76. Comparison of Dispersion Models for Wastewater Treat-

Companson of Dispersion Models for Wastewater Treat-ment Emissions, Jin-Sheng Lin and Lynn M. Hil-demann, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11. Dinner Presentation, Robert D. Brenner, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),

Planning and Air Quality, Roger L. Wayson, ed., 1992), p1-6.

Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.

Field Measurements of Tracer Gas Transport Induced by Barometric Pumping, R. H. Nilson, W. B. McKinnis, P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p710-716.

Incineration—Panacea or Pandemic? Harvey W. Rogers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p157-162.

Integrated Assessment of Acid-Deposition Effects on

Integrated Assessment of Acid-Deposition Effects on Lake Acidification, Edward S. Rubin, Mitchell J. Small, Cary N. Bloyd and Max Henrion, EE Jan./Feb. 92, p120-134.

Stop and Go Better Than Easing the Flow? (itr), Eugene H. Harlow, CE July 92, p36,38.

Keynote Presentation, Julie Belaga, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p7-13.

Mobilization and Removal of Contaminants Associated with Urban Dust and Dirt, Brian A. Dempsey, Yuan-Liang Tai and Stuart Harrison, (Environmental Engi-neering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p486-491.

Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992, 0-87262-815-9, 374pp.

VOCs: The New Effluent, Teresa Austin, CE Mar. 92, p42-45.

Air pollution control

Air Emissions Testing of Air Toxics at WWTPs, Michael J. Barboza, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p79-85.

Arizona's Metropolitan Travel Reduction Programs, Elizabeth K. Burns, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p76-84.
Clean Fuels to Clean Up?, CE July 92, p11.

Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of 1990, Ronald J. Roggenburk, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p46-55.

Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Morrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210.

Evaluation Method for Advanced Acid Rain Compliance Technology, H. Christopher Frey and Edward S. Ru-bin, EY Apr. 92, p38-55.

Generating Detailed Emissions Forecasts Using Regional Transportation Models: Current Capabilities and Issues, Robert G. Ireson, Julie L. Fieber and Marianne C. Causley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p142-160.

Land Use, Transportation and Air Quality Relationships, George J. Scheuernstuhl and Jeffrey H. May, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p90-99.

Summary of Remudship Piccoming C. Marian Generating Detailed Emissions Forecasts Using Regional

ec., 1992), p90-99.

Summary of Roundtable Discussion on Modeling Issues, Paul E. Benson, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278.

Toward a Low-Emissions Wastewater Treatment Plant, Albert B. Pincince, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p1-6. VOCs: The New Effluent, Teresa Austin, CE Mar. 92, p42-45.

Air pollution laws

Air poliution issue.
The Clean Air Act: Opportunities for the Transit Industry, Sarah Siwek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-75.
Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of 1990, Ronald J. Roggenburk, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p46-55.
Dinner Presentation, Robert D. Brenner, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p1-6.

Keynote Presentation, Julie Belaga, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p7-

Opportunities for Improved Transportation Planning, John H. Suhrbier, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p30-45.

Roundtable Discussion Sessions, Thomas Wholley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p271-275.

San Francisco Bay Area's Experience Developing Trans-portation Control Measures for Air Quality Plans, Thomas Perardi, (*Transportation Planning and Air Quality*, Roger L. Wayson, ed., 1992), p56-63.

Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A High-way Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),

Travel Markets: An Approach to TCM Effectiveness Evaluation, Donald A. Torluemke, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p177-181.

Air quality
Arizona's Metropolitan Travel Reduction Programs, Elizabeth K. Burns, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p76-84.
California's Tradable Emissions Policy and Greenhouse Gas Control, John P. Dwyer, EY Aug. 92, p59-76.
Characteristics of MOBILE4 and EMFACTE Models, Julie Fieber, Barbara Austin and Jeremy Heiken, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p255-570.
The Clean Air Act: Opportunities for the Transit Industrial

ed., 1992), p255-570.

The Clean Air Act: Opportunities for the Transit Industry, Sarah Siwek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-75.

Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of 1990, Ronald J. Roggenburk, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p46-55.

Developing Protocols for Motor Vehicle Air Quality Modeling, Peter H. Guldberg, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p306-314.

Dinner Presentation, Robert D. Brenner, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),

Planning and Air Quality, Roger L. Wayson, ed., 1729, p1-6.

Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.

Favironmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, 0-87262-878-7, 685pp.

ed., 1992, 0-87262-878-7, 685pp.

Estimation of Travel Related Inputs to Air Quality Models, Terry L. Miller, Arun Chatterjee, Jerry Everett and Cindy McIlvaine, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125.

Generating Detailed Emissions Forecasts Using Regional Transportation Models: Current Capabilities and Isaues, Robert G. Ireson, Julie L. Fieber and Marianne C. Causley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p142-160.

GIS for Transportation and Air Quality Analysis, Reginald R. Souleyrette, Shashi K. Sathisan, David E. James and Soon-tin Lim, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p182-194.

Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, Guido Schattanek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p315-326.

Intersection Air Quality Analysis, John Zamurs, Robert Intersection Air Quality Analysis, John Zamurs, Robert Intersection Air Quality Analysis, John Zamurs, Robert

Intersection Air Quality Analysis, John Zamurs, Robert Conway and Stephen S. Rosen, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p283-297.

In-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transpor-tation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-254.

1992, p217-239.
Land Use, Transportation and Air Quality Relationships, George J. Scheuernstuhl and Jeffrey H. May, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p90-99.

od., 1992, p90-99.

Modeling Guideline for Air Quality Analysis of Intersections, George J. Schewe, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p298-305.

Opportunities for Improved Transportation Planning, John H. Suhrbier, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p30-45.

Roundtable Discussion Sessions, Thomas Wholley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p271-275.

San Francisco Bay Area's Experience Developing Transportation Control Measures for Air Quality Planning and Air Quality, Roger L. Wayson, ed., 1992), p56-63.

Summary of Roundtable Discussion on Modeling Issues, Paul E. Benson, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278.

Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278.

Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992, 0-87262-815-9, 374pp.

Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A High-way Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),

running and an experiment places, places, Christopher R. Fleet and Patrick DeCorla-Souza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), pl26-141.

We Need to Integrate Water Transportation and Environ-mental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p403-406.

Air quality standards
Mobilization and Removal of Contaminants Associated
with Urban Dust and Dirt, Brian A. Dempsey, YuanLiang Tai and Stuart Harrison, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p486-491.
Roundtable Discussion Sessions, Thomas Wholley,
(Transportation Planning and Air Quality, Roger L.
Wayson, ed., 1992), p271-275.

Air stripping

Air stripping
Comparison of Dispersion Models for Wastewater Treatment Emissions, Jin-Sheng Lin and Lynn M. Hildemann, (Environmental Engineering: Saving a Threatmend Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11.
Dual-System Cleanup, Chien D. Ngo, Philip J. Mitchell, John T. Su and Gary M. Carlton, CE Aug. 92, p45-47.
Removal of 1,2 Dibromo-3-Chloropropane by Countercurrent Cascade Air Stripping, N. Nirmalakhandan, Won Jang and Richard E. Speece, EE Mar/Apr. 92, p226-237.

Air supported structures
Inflation Concept Development for Inflatable Lunar
Structures, Craig E. Miller, (Engineering, Construction,
and Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p 17-182.

Estimation of Daytime Net Radiation Over Well-Watered Grass, A. Dong, S. R. Grattan, J. J. Carroll and C. R. K. Prashar, IR May/June 92, p466-479.

Air traffic The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p.250-257.

The Design and Use of Flow-Through Hold Pads, Douglas F. Goldberg, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992),

p1-6.

The Design of the Airside Concourses, James M. Suehiro, Edward K. McCagg and J. M. Seracuse, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p207-216.

Fine Tuning the Airfield: The New Denver International Airport, Richard F. Veazey, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p7-13.

Impact of the New Deaver Airport on the Air Traffic Control System, Walter E. Flood, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p244-249.

New Hong Kong International Airport, Tom Darmody and Peter Wright, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p272-280.

Air transportation Aviation Bill Takes Flight, Casey Dinges, CE July 92, pl 14.

p114.
Characteristics of High-Speed Runway Exits for Airport Design, Antonio A. Trani, Antoine G. Hobeika, Byung J. Kim, Hisao Tomita and David Middleton, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24.
International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992, 0-87262-871-X, 284pp.
Model for Air Transportation: A Resourcia and V.

Model for Air Travel Demand, V. R. Rengaraju and V. Thamizh Arasan, TE May/June 92, p371-380. New Hong Kong International Airport, Tom Darmody and Peter Wright, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), 232-232.

All water interactions

All water interactions and in the Behaviour of Used CANDU Fuel Stored in 150°C Moisture-Saturated Air, K. M. Wasywich and C. R. Frost, (High Level Radioactive Waste Management Program Committee, 1992), p1166-1173.

Influence of Liquid Length Variation in Hydraulic Transients, Enrique Cabrera, José Abreu, Rafael Pérez and Antonio Vela, HY Dec. 92, p1639-1650.

The Influence of Moisture on Air Oxidation of UO<sub>2</sub>: Calculations and Observations, Peter Taylor, Robert J. Lemire and Donald D. Wood, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1442-1448.

Aircraft Noise Monitoring at Denver International Air-port, Andrew S. Harris, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p41-48.

13724, pq.1-48.
FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarreta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p940-945.

1992), p940-945.

Measurement of Arifield Pavement Response Under Moving Aircraft Loads, Dennis R. Hiltunen and Albert J. Bush, III., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p336-351.

The National Aero-Space Plane Program—A Revolutionary Concept, Robert R. Barthelemy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2382-2391.

Studies Related to Aircraft/Rumway Friction Performance, Thomas J. Yager, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p64-71.

1992), p64-71.

Aircraft technology
The National Aero-Space Plane Program—A Revolutionary Concept, Robert R. Barthelemy, (Engineering, Construction, and Operations in Space, III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2382-2391.
Transverse Scham Err.

Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.

Airfields

Airfield Pavement Creep Failure Investigation, John C. Potter, CF Aug. 92, p177-184.
An Airfield Pavement Forensic Analysis: Cairo East Air Base, Randolph Charles Ahlrich and Gary Lee Anderton, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992). p39-52

cuencies and ratures, Thomas D. White, ed., 1992), p39-52.

The Application of Dynamic Modeling in the Nondestructive Testing of Roads and Airfields, Mark Anderson, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p321-335.

Design Considerations for Multi-Wheel Aircraft, Walter R. Barker and Carlos R. Gonzalez, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p49-63.

Dynamic Analysis of Rigid Airport Pavements with Discontinuities, Anant R. Kukreti, Mohammad R. Taheri and Ragnar H. Ledesma, TE May/June 92, p341-360.

Fine Tuning the Airfield: The New Denver International Airport, Richard F. Veazey, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p7-13.

Integrated Pavement Management System for Kennedy International Airport, Gonzalo R. Rada, Charles W. Schwartz, Matthew W. Witczak and Scott D. Rabinow, TE Sept-/Oct. 92, p666-685.

TE Sept./Oct. 92, p666-685.

Load and Temperature Measurements for a Study of Rutting Under High-Pressure Tires, William C. Dass, Susan M. Dass and James G. Murfee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212.

Measurement of Shock Pressure from FWD on a Concrete Pavement by Impedance-Matched Shock Gauge, Piyush K. Dutta and John Kalafut, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228.

Roughness Measurements of Airfield Pavements, Elson B. Spangler, Anthony G. Gerardi and Hisao Tomita, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366.

Settling Down Easy, Charles R. Heidengren, CE Dec. 92, p72-74.

Sydney Airport International Terminal Development, Barry R. Munce, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p258-271.
USAF's New Contingency Soils/Pavement Testing Van, Mark S. Buncher and Don J. Christiansen, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p27-40.

Airport access

Autori access
Fixed Rail Service to Airports: Bibliography, Fixed Rail
Service to Airports Subcommittee of the ASCE Landside Committee, (International Air Transportation: A
New International Airport, Robert E. Boyer, ed., 1992), p232-234.

Opportunities for Fixed Rail Service to Airports, William J. Sproule and Srinivasa Mandalapu, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p223-231.

Airport construction

Airpoir construction

City and County of Denver Approach to Management Requirements, Ginger S. Evans, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p164-169.

Construction Approach to Denver International Airport, Guy M. (Pat) Stricklin, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p184-191.

Hong Kong Port Facilities, Airport, and Housing Require New Concepts, C. K. Chow, El Oct. 92, p403-414. International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992, 0-87262-871-X, 284pp.

284pp. Jet Grouting in Airport Construction, Yoshiomi Ichihashi, Mitsuhiro Shibazaki, Hiroaki Kubo, Masahiro Iji and Akira Mori, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 82-193. The New Munich Airport—Planning, Construction and Opening of a New International Turnstile Airport in Europe, Willi Hermsen, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), pl 48-154.
New Soul Metropolitian Airport William H. Small (Inc.)

New Seoul Metropolitan Airport, William H. Small, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p155-162.

Start-Ups, CE June 92, p11.

TRB Report Predicts Little Future Airport Construction, CE Jan. 92, p21-22.

CE Jan. 92, p21-22.
Use of GIS for Resource Management in Hong Kong, Jan R. Selwood and Peter G. D. Whiteside, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p942-949.
Wildlife, Water Chotean Affect Airmort Project, CE Feb. Wildlife, Water Shortage Affect Airport Project, CE Feb. 92, p24.

Airport control towers

The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257.

Impact of the New Denver Airport on the Air Traffic Control System, Walter E. Flood, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p244-249.

Airport design

Arport eesgn
The Design of the Airside Concourses, James M. Suehiro,
Edward K. McCagg and J. M. Seracuse, (International
Air Transportation: A New International Airport,
Robert E. Boyer, ed., 1992), p207-216.

RODER E. BOYET, ed., 1992), p.207-216.
Fine Tuning the Airfield: The New Denver International Airport, Richard F. Veazey, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p.7-13.
International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992, 0-87262-871-X, 284pp.

 Zoopp.
 Management of Design, Richard L. Haury, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p170-183.
 New Hong Kong International Airport, Tom Darmody and Peter Wright, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), 232-239. p272-280.

The New Munich Airport—Planning, Construction and Opening of a New International Turnstile Airport in Europe, Willi Hermsen, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p148-154.

Optimum Geometries for Pier-Type Airport Terminals, S. Bandara and S. C. Wirasinghe, TE Mar./Apr. 92, p187-206.

Settling Down Easy, Charles R. Heidengren, CE Dec. 92, p72-74.

Start-Ups, CE Jan. 92, p11.

Altroort runways
Characteristics of High-Speed Runway Exits for Airport
Design, Antonio A. Trani, Antonio G. Hobeika, Byung
J. Kim, Hisso Tomits and David Middleton, (International Air Transportation: A New International Airport,
Robert E. Boyer, ed., 1992), pl4-24.

Continuing in Airport Construction, Yoshiomi

Robert E. Boyer, ed., 1992), p14-24.

Jet Grouting in Airport Construction, Yoshiomi Ichihashi, Mitsuhiro Shibazaki, Hiroaki Kubo, Masahiro Iji and Akira Mori, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193.

Roughness Measurements of Airfield Pavements, Elson B. Spangler, Anthony G. Gerardi and Hisao Tomita, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366.

Studies Related to Aircraft/Runway Friction Performance, Thomas J. Yager, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p64-71.

Sydney Airport International Terminal Development, Barry R. Muace, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p258-271.

p258-271.

irport site selection

The New Munich Airport—Planning, Construction and Opening of a New International Turnstile Airport in Europe, Willi Hermsen, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p148-154.

Airport terminals

Airport terminals
Denver International Airport Fabric Roof Design, James
H. Bradburn, Horst Berger and Lee Erdman, Unternational Air Transportation: A New International Airport,
Robert E. Boyer, ed., 1992, p. 192-198.
An Economic Evaluation of the Thunder Bay Air Terminal Development Strategies, John P. Braaksma, Andrew Schmidt and Peter Friedrichs, (International Air
Transportation: A New International Airport, Robert E.
Boyer, ed., 1992), p. 124-147.
JKF Airport Cargo System Will Be U.S. First, CE May
92, p. 12-13.
Optimum Geometries for Pier-Type Airport Terminals.

Optimum Geometries for Pier-Type Airport Terminals, S. Bandara and S. C. Wirasinghe, TE Mar./Apr. 92, p187-206.

Sydney Airport International Terminal Development, Barry R. Munce, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992),

Tensile Terminal, Horst Berger and Edward M. De Paola, CE Nov. 92, p40-43.

Airports
Airport Landside Management: An Unique Airport Specialty, Louis A. Turpen, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p.212-222.

Airportive Airfield Pavement Quality Control, Raymond

1992), p212-222.
Alternative Airfield Pavement Quality Control, Raymond P. Rawe and Terry A. Ruhl, Unternational Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p109-123.

Aviation Bill Takes Flight, Casey Dinges, CE July 92,

p114. p114.
Bagage System Implementation at DIA, Louis S. Nelson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p235-238.
The Design and Use of Flow-Through Hold Pads, Douglas F. Goldberg, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992),

pl-6.
Effective Airport Environs Planning in the 1990s, Kristi
McKenney, (International Air Transportation: A New
International Airport, Robert E. Boyer, ed., 1992), p25-

Experiments with Wind Effects on Pavement Runoff, Jo-seph R. Reed, David F. Kibler and George Krallis, (H)-draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.

FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarreta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p940-945.

Fixed Rail Service to Airports: Bibliography, Fixed Rail Service to Airports Subcommittee of the ASCE Landside Committee, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992).

Posterial Intercontinental Airport Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloth, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

Impact of the New Denver Airport on the Air Traffic Control System, Walter E. Flood, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p244-249.

Jacobert, ed., 1974.), p244-249.
Integrated GIS Solutions with Civil Engineering Projects, Jerry W. Williams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p328-331.

International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992, 0-87262-871-X, 284pp.

Many Engineering Issues and Challenges Met in Develop ment of Hong Kong, C. K. Chow, El Jan. 92, p60-70.

ment of riong Kong, C. R. Chow, Ed Jal. 28, 1905 Oc. Minneapolis'St. Paul International (MSP) Part 150 Implementation Design Overview, Steven J. Vecchi, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p32-40.

The New Munich Airport—Planning, Construction and Opening of a New International Turnstile Airport in Europe, Willi Hermsen, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p148-154.

Non-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1121-1128.

Opportunities for Fixed Rail Service to Airports, William J. Sproule and Srinivasa Mandalapu, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p223-231.

People Mover Helps Tame O'Hare Tangles, CE Dec. 92, p10.

Planning and Budgeting for FAA Facilities and Equipment, James D. Bishop, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p239-243.

Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

Role of the Coastal Engineer in Civil Engineering Prac-tice, ASCE Coastal Engineering Technical Committee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p918-934.

Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silversion and Mark Easley, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361.

Roller Compacted Concrete Tailing Retention Dam, Daniel L. Johnson, Nigel A. Skermer and Frank Bergstrom, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

Tudor Road Rehabilitation, Anchorage, Alaska, T. S. Vinson, J. W. Rooney, H. Zhou and N. Coetzee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

Anama
Economical and Statistical Based On-Farm Irrigation
Scheduling, L. Niel Allen, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p146-151.

Algae
Determining Causes for Taste and Odor in Bandar Abbas's Drinking Water, Mahmoud Asadi and A. R. Mesdaghinia, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p610-616.

Algorithms
Automated Diffusion Wave Modeling of Watershed Hydraulic, Robert N. Eli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), Automated Operation of Pumping Stations in Russia, Yuri A. Ermolin and Leonid I. Zats, IR July/Aug. 92, p555-563.

p335-363. Building KBES for Diagnosing PC Pile With Inductive Learning, Yi-Cherng Yeh, Yau-Hwaug Kuo and D. S. Hsu, CP Apr. 92, p200-219. Development of a Phase I Prescriptive Reservoir Model, Robert D. Carl, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p667-

Discrete Optimization of Structures Using Genetic Algorithms, S. Rajeev and C. S. Krishnamoorthy, ST May 92, p1233-1250.

rithms, S. Rajeev and C. S. Krishnamoorthy, ST May 92, p123-1250.

Effect of Active Control on Closely Spaced Natural Frequencies, K. Xu, P. Warnitchai and T. Igusa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p693-696.

Energy Efficient Pump Station Operation with a Pump Switching Constraint, Kofi Awumah and Kevin E. Lansey, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p604-609.

An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, Y. Wang and R. K. N. D. Rajapakse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1008-1011.

Explicit Calculation of Pipe-Network Parameters, Paul F. Boulos and Don J. Wood, HY Nov. 90, p1329-1344.

A Fast Algorithm for the Rectilinear Single Facility Location Problem, G. L. Xue and J. B. Rosen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1113-1120.

First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Peliability, Y. K. Lin, ed., 1992), p531-534.

High-Resolution Interwell Seismic Experiments in Sedimentary Formations, Jorge O. Parra and Brian J. Zook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p519-532.

(engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p519-532.

Hydrodynamic Furrow Irrigation Model with Specified Space Steps, E. Bautista and W. W. Wallender, IR May/June 92, p460-465.

Improved Thermal Predictions in CE-QUAL-W2, Raymond S. Chapman and Thomas M. Cole, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p158-163.

Interaction of Steep Waves with Vertical Walls, D. Sen, WW Sept./Oct. 92, p453-473.

Massively Parallel Computing, C++ and Hydrocode Algorithms, Allen C. Robinson, Arlo L. Ames, H. Eliot Fang, Dion Pavlakos, Courtenay T. Vaughan and Philip Campbell, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p519-526.

Modal Identification Algorithm with Unmeasured Input, C. F. Cremona and J. A. Brandon, AS Oct. 92, p442-449.

Neural Network Modeling of the Mechanical Behavior of

449.
Neural Network Modeling of the Mechanical Behavior of Sand, Glenn W. Ellis, Chengwan Yao and Rongda Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p421-424.
Nonlinear Eigensolver for Exact Vibration Analysis, H. A. Smith, D. C. Sorensen and R. K. Singh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p920-923.

Nonlinear Structural Analysis on a Distributed System, Eric M. Lui and Fred H. Schlereth, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 9647-654.

1992b, pod-60-9.
Numerical Model Verification by Prescribed Solution Forcing—A Test Case, Dick P. Dee, F. Mauricio Toro and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p416-421.

On-Line Optimal Control of Urban Water Supply, Otto J. Helweg, Shahram Pezeshk and Kenneth E. Oliver, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p532-536.

Open-Channel Flow Algorithm in Newton-Rapl Form, John N. Paine, IR Mar./Apr. 92, p306-319.

Form, John N. Faine, IK Mat/Apr. 92, p306-319.
Parallelization of Linear Finite Element Analysis, Gwolong Lai and Hsin-Chu Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p655-662.

1992), p655-602.

Planning and Operation of a Multi-Reservoir Water Distribution System, Ali Diba, Peter W. F. Louie, Manoucher Mahjoub and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p316-321.

Karamouz, ed., 1992), p316-321.

Recent Experiences in PC Software Development, Kenneth M. Will, Asquith Bailey and Timothy Dodd, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1195-1203.

Scheduling Demand-Responsive Transportation Vehicles Using Fuzzy-Set Theory, Shinya Kikuchi and Robert A. Donnelly, TE May/June 92, p391-409.

Seismic Wave Propagation by Finite Differences on the Connection Machine, Jacek Myczkowski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p115-118.

Shortest Path Within Polygon and Best Path Around or through Barriers, Yihua Xiong and Jerry B. Schneider, UP June 92, p65-79.

Slepian Process of a Non-stationary Process, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p296-299.

Solid Modeling of RC Beams: 1. Data Structures and Algorithms, M. A. Austin and J. L. Preston, CP Oct. 92, p389-403.

Structural Reliability Analysis Methods for Implicit Per-formance Functions, Y.-T. Wu, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p483-486.

Alkalinity

Alkali Activation of Class C Fly Ash, Amitava Roy, Paul J. Schilling, Harvill C. Eaton and Roger K. Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p104-115.

son, ed., 1992, p104-113.
Alkaline Sludge Stabilization: A "Quick Fix" and Long Term Sludge Management Option for Burlington, North Carolina, Stephen R. Shoaf, Morris V. Brookhart and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p399-

Alkaline Sludge Stabilization Processes Offer Viable Sludge Management Options, Gary S. MacConnell, Morris V. Brookhart and Philip E Smith, Environmental Engineering: Saving a Threatened Resource—In Search of Soluti s, F. Pierce Linaweaver, ed., 1992), p394-398.

Alkali-Silica Reactivity: An Overview of a Concrete Durability Problem, D. Stephen Lane, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p231-244.

Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29.

Rebar Corrosion in MgSO<sub>4</sub> Solution, Mohammad Sham-im Khan and Abdul-Hamid J. Al-Tayyib, MT Aug. 92, p292-299.

Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, Zhihuai Xue, Zhongling Hua, Qi Li and Naiyi Yao, (Environmental Engineering: Saving a Threatmend Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p376-381.

Alluvial channels

Alluvial channels

Aggradation-Degradation Process in Alluvial Channels,
Chin-lien Yen, Shou-young Chang and Hong-Yuan Lee,
HY Dec. 92, p1651-1669.

Alluvial Chanals Adequacy, Siddig E. Ahmed, IR July/
Aug. 92, p543-554.

Bank Erosion Study of the Nile River at Bani Mazar, A.
F. Ahmed and M. M. Gasser, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p816-821.

Development of Bed Features, Arved J. Raudkivi and
Hans-H. Witte, HY Sept. 90, p1063-1079.

First Step Away from Lacey's Regime Equations, Michael
A. Stevens and Carl F. Nordin, Jr., HY Nov. 90,
p1422-1425.

Note on Lag in Bedload Discharge, Subhash C. Jain, HV

p1424-1423. Note on Lag in Bedload Discharge, Subhash C. Jain, HY June 92, p904-917. Prediction of Natural Channel Hydraulic Roughness, Sid-dig E. Ahmed and Mohammed B. Saad, IR July/Aug. 92, p632-639.

92, p632-639.
Alluvial fana
Design of Flood Protection for Transportation Alignments on Alluvial Fans, Richard H. French, IR Mar./Apr. 92, p320-330.
Preferred Directions of Flow on Alluvial Fans, Richard H. French, HY July 92, p1002-1013.
Successful Interactions Between Hydraulic Engineering and Geomorphology in Identifying Flood Hazard Areas in the Southwestern United States, Richard H. French and Jeffrey R. Keaton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p581-586.
Urban Development on Alluvial Fans, Lan-Yin Li Weber

Urban Development on Alluvial Fans, Lan-Yin Li Weber and Virginia Bax-Valentine, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p11-

18. Verification of an Alluvial Fan Drainage Design Methodology for Transportation Alignments, Syndi J. Flippin and Richard H. French, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p575-580.

Allavial streams
Bed-Load Coefficients, Raul Pacheco-Ceballos, HY Oct.
92, p1436-1442.
Development of Bed Features, Arved J. Raudkivi and Hans-H. Witte, HY Sept. 90, p1063-1079.
Incipient Motion during Static Armoring, Anders Wörman, HY Mar. 92, p496-501.
Loop Rating Curves from Goodwin Creek, Roger A. Kuhnle and Andrew J. Bowie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p741-746.
Menu of Coupled Velocity and Sediment-Discharge Relations for Rivers, M. Fazle Karim and John F. Kennedy, HY Aug. 90, p978-996.
Sediment Management with Submerged Vanes. II: Applications, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

Allwium
Boundary Shear Stress and Roughness Over Mobile Alluviai
Beds, Peter J. Whiting and William E. Dietrich,
HY Dec. 90, p.1495-1511.
Long Piles Driven for New Orleans Superwharf, CE July
92, p.21.

Mean Size Distribution of Bed Load on Goodwin Creek, Roger A. Kuhnle and Joe C. Willis, HY Oct. 92, p1443-1446.

Site-Dependence of Spatial Coherency, Norman Abra-hamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p260-263.

Bending of Thin Plate with Three-Point Support, Alexander Azarkhin, ST May 92, pl416-1419.
The Crown and the Curtain Wall, Dudley G. McFarquhar, CE Aug. 92, p62-65.

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1250-1261.

dechanical Response of Cellular Materials Used in Waste Shipping Containers, A. K. Maji, S. Donald and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.308-

Multi-Barrier, Copper-Base Containers for HLW Dispos-al, Dale T. Peters, Konrad J. A. Kundig, David F. Med-ley and Paul A. Enders, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p366-376.

Plant Produces Cements for Rugged Environments, CE Sept. 92, p14.

Projectile Shape and Material Effects in Hypervelocity Impact Response of Dual-Wall Structures, William P. Schonberg and Kent Darzi, AS Oct. 92, p405-424.

Chemical Dosing of Small Water Utilities Using Regression Analysis, Glean W. Ellis, Anthony G. Collins, Xi Ge and Catherine R. Ford, EE May/June 91, p308-319.

American Association of Engineering Societies
AAES Model Anticipates Degree Production, CE Oct. 92,
p68,70.

Carroll, Shen Take Top Engineering Prizes at Washington Awards Ceremony, NE May 92, p1.

Engineering Unity Group Takes Aim at Image Building, CE Oct. 92, p70.

Prospect for Unity Grows as Societies Rejoin AAES, NE Mar. 92, p2.

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

Non-Traditional Water Quality Approaches, Carl P. Houck, Joan Brooks, Ronald D. French and Duane Humble, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438.

Process Design for Bioremediation of Nitrogen-Species Contamination of Soils and Groundwater, Paul D. Turpin, J. Michael Henson and Steven L. Martin, (En-vironmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.

Thermodynamic Model of Nitrification Kinetics, Thongchai Yantarasri, Albert Garcia, III. and David Brune, EE July/Aug. 92, p568-584.

Inelastic Amplification Factor for Design of Steel Beam-Columns, I. S. Sohal and N. A. Syed, ST July 92, p1822-1839.

Fatigue Life of Offshore Steel Structures Under Stochas-tic Loading, Henning Agerskov and Niels Thougard Pedersen, ST Aug. 92, p2101-2117.

Conditioning and Dewatering of Anaerobically Digested BPR Sludge, William R. Knocke, Jeffrey W. Nash and Clifford W. Randall, EE Sept./Oct. 92, p642-656.

Effluent Nitrite Accumulation in the Heterotrophic Deninument NITHE Accumulation in the Heterotrophic Deni-trification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

Expert System for Anaerobic-Digestion-Process Opera-tion, Michael W. Barnett and John F. Andrews, EE Nov/Dec. 92, p949-963.

pH Control in Anaerobic Treatment of Industrial Waste-water, G. K. Anderson and G. Yang, EE July/Aug. 92, p551-567.

U.S. Sludge Digesters: From Pancakes to Eggs, Teresa Austin, CE Oct. 92, p36-39.

### Anserobic filters

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

ed., 1992), p417-422.

Annerobic processes

Pilot-scale Annerobic Biological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapil Sabharwal, (Ervironmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450. Treatability Study on the Biological Treatment of Landfill Leachate and Gas Condensate, Bill Y. Liu, Alan Y. Li and James F. Urek, (Ervironmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p405-410.

Analogs
Application of Results from the Poços de Caldas Project
in the Kristallin-I HLW Performance Assessment, I. G.
McKinley, W. R. Alexander, C. McCombie and P.
Zuidema, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p357-361.

Printed Executer Simulations of the Hydrogeology at

Committee, 1992, p337-301.

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, John L. Smoot, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p345-351.

Multi-Barrier, Copper-Base Containers for HLW Dispos-al, Dale T. Peters, Konrad J. A. Kundig, David F. Med-ley and Paul A. Enders, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p366-376.

Natural Analogues: The State of Play in 1992, Neil A. Chapman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-

gram Committee, 1992), p1695-1700.

The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1429-1436.

Solubility of Uranyl in Brine, Hiromichi Yamazaki, Vas-silios Symeopoulos, Bo Lagerman and Gregory A. Choppin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1607-1611.

Urany! Oxide Hydrates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, R. J. Finch and R. C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 232 237 p332-337.

Analysis and Implementation of Thin-Layer Element for Interfaces and Joints, K. G. Sharma and C. S. Desai, EM Dec. 92, p2442-2462.

Analysis of Compressibility of Sensitive Soils, T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

GI Jan. 90, plus-118.

Analytical Aerodynamic Investigation of Cable-Stayed Helgeland Bridge, Imre Kovacs, Holger S. Svensson and Elljam Jordet, ST Jan. 92, pl47-168.

Analytical Solution of Steady Seepage into Double-Walled Cofferdams, Sunirmal Baneriee and Angel Muleshkov, EM Mar. 92, p525-539.

leshkov, EM Mar. 92, p525-539.

An Analytical Solution to a Clamped Cylindrical Panel with Anti-Symmetric Angie-Ply Laminations, Humayun R. H. Kabir and J. B. Kennedy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Behavior of Isotropic R/C Bridge Decks on Steel Girders, I.-K. Fang, J. Worley, N. H. Burns and R. E. Klingner, ST Mar. 90, p659-678.

Boundary-Continuous, Equiper, Solution, for Clamped.

Boundary-Continuous Fourier Solution for Clamped Mindlin Plates, Humayun R. H. Kabir and Reaz A. Chaudhuri, EM July 92, p1457-1467. Coupled Vertical and Horizontal Galloping, Kathleen F. Jones, EM Jan. 92, p92-107.

Crack Andysis of Reinforced Concrete Tension Members, H. C. Chan, Y. K. Cheung and Y. P. Huang, ST Aug. 92, p2118-2132.

Drying and Cracking Effects in Box-Girder Bridge Seg-ment, Zdeněk P. Bažant, Vladimír Křístek and Jan L. Vítek, ST Jan. 92, p305-321.

Dynamic Compaction Analysis, Y. K. Chow, D. M. Yong, K. Y. Yong and S. L. Lee, GT Aug. 92, p1141-1157. Effect of Static Offset on TLP Modeling, C. Oran, EM

Jan. 92, p74-91.

Evaluation of System-Reliability Methods for Cable-Stayed Bridge Design, Michel Bruneau, ST Apr. 92, p1106-1120.

Experimental Research on Groyne Stability Under Very Oblique Wave Action, Antonio Baonza and José M. Berenguer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p718-732.

Generalized Slope Stability Analysis: Interpretation, Modification, and Comparison, Dov Leshchinsky and Ching-Chuan Huang, GT Oct. 92, p1559-1576.

GIS for Transportation and Air Quality Analysis, Reginald R. Souleyrette, Shashi K. Sathisan, David E. James and Soon-tin Lim, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p182-194.

Inelastic Limit States Design. Part I: Planar Frame Studies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

Inelastic Limit States Design. Part II: Three-Dimensional Frame Study, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2550-2568.

Investigation of Mackay Dam Following the 1983 Borah Peak Earthquake, Leslie F. Harder, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p956-972.

Lagrangian Solution of St. Venant's Equations for Alluvi-al Estuary, Hubert H. G. Savenije, HY Aug. 92, p1153-

Mechanism of Biological Treatment in Plug-Flow or Batch Systems, Hasan Ali San, EE July/Aug. 92, p614-

Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

Planning/Analysis of VPA's Norfolk North Terminal, Thomas Ward, Richard A. Woodman and Bernardo de Castilho, (Ports '92, David Torseth, ed., 1992), p134-

Ship-Berth Link as Bulk Queueing System in Ports, Zoran R. Radmilovich, WW Sept./Oct. 92, p474-495.

Slab Behavior in Composite Beams at Openings. I: Analysis, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p2287-2303.

Soil Strengths from Back Analysis of Slope Failures, J. Michael Duncan and Timothy D. Stark, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p890-

Stability of the Olga C Test Embankment, J. G. Lavallée, G. St-Arnaud, R. Gervais and Y. Hammamii, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p1006-1021.

State-Space Analysis and Control of Slow Transients in Pipes, Masashi Shimada, HY Sept. 92, p1287-1304. Stiffened Sheathings of Orthotropic Cylindrical Shells, P. Rigo, ST Apr. 92, p926-943.

Tide and Storm Surge Predictions Using Finite Element Model, J. J. Westerink, R. A. Luettich, A. M. Baptista, N. W. Scheffner and P. Farrar, HY Oct. 92, p1373-1390.

Time Domain Analysis of Dynamically Loaded Single Piles, S. M. Mamoon and P. K. Banerjee, EM Jan. 92, p140-160.

Ultimate Loads of Continuous Composite Bridges, John B. Kennedy and Mohamed Soliman, ST Sept. 92, p2610-2623.

Analytical Modeling of Bonded Bars under Cyclic Loads, Parviz Soroushian, Kienuwa Obasaki and Shashidhara Marikunte, ST Jan. 91, p48-60.

Analytical Moment-Curvature Relations for Tied Concrete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544.

Chemical Analysis in Space Exploration: A Lunar-based Chemical Analysis Laboratory (LBCAL), Mitchell K. Hobish, Charles W. Gehrke, Cyril Ponnamperuma and Robert W. Zumwalt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p565-575.

Optimization of Discontinuous Fiber Composites, Victor C. Li, M. Maalej and T. Hashida, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1000-1003.

ed., 1992), p1000-1003.

A Simple Method to Compute Wave Loads on a TLP, Moo-Hyun Kim, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p158-172.

UTEXAS3 Example Problems, Earl V. Edris, Jr. and Dale F. Munger, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066.

Ductile Multiple-Anchor Steel-to-Concrete Connections, Ronald A. Cook and Richard E. Klingner, ST June 92, p1645-1665.

### Anchorages

Advancing Anchorage Technology, Stuart Littlejohn, CE July 92, p61-64. Analytical Modeling of Bonded Bars under Cyclic Loads, Parviz Soroushian, Kienuwa Obasaki and Shashidhara Marikunte, ST Jan. 91, p48-60.

Marikunte, ST Jan. 91, p48-60.
Bond Anchorage of Pretensioned FRP Tendon at Force
Release, Antonio Nanni, Masaharu Tanigaki and Koichi Hasuo, ST Oct. 92, p2837-2854.
Conflict of Interest in Deep-Draft Anchorage Usage—
Application of QT, Jan A. Berg-Andreassen and Adam
K. Prokopowicz, WW Jan./Feb. 92, p75-86.
Guidelines for Design of Cable-Stayed Bridges, ASCE
Committee on Cable-Stayed Bridges, (Man-Chung
Tang, chmn.), 1992, 0-87262-900-7, 70pp.

Hysterstic Rehavior of Anchorages Stin in R/C Members.

Hysteretic Behavior of Anchorage Slip in R/C Members, Murat Saatcioglu, Jaber M. Alsiwat and Guney Ozcebe, ST Sept. 92, p2439-2458.

Reinforcement Anchorage Slip under Monotonic Load-ing, Jaber M. Alsiwat and Murat Saatcioglu, ST Sept. 92, p2421-2438.

Uplift Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaly, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

Anchored bulkhends Incorporating Corrosion in Reliability-Based Design of Anchored Bulkheads, M. J. S. Roth, T. C. Sandford and H. J. Dagher, (Probabilistic Mechanics and Structural and Geolechnical Reliability, Y. K. Lin, ed., 1992), p160-163.

## nchoring

Pre-Compression of Concrete Breasting Dolphins Solves Construction Problem, Robert A. Blowers, Alexander Matlin and Antoni J. Zelechowski, (Ports '92, David Torseth, ed., 1992), p602-615.

Anchors in the Desert, Donald A. Bruce, William Fiedler and Ronald Triplett, CE Dec. 91, p40-43.

Balanced Seismic Design of Anchored Retaining Walls, G. Neelakantan, M. Budhu and R. Richards, Jr., GT June 92, p873-888.

June 92, p873-888.

Design of Anchored Geosynthetic Systems for Slope Stabilization, Roman D. Hryciw and Kamarudin Haji-Ahmad, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1464-1480.

Effects of K<sub>Q</sub> and Overconsolidation on Uplift Capacity, Adel Hanna and Ashraf Ghaly, GT Sept. 92, p1449-1469.

Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchors, O. Chaallal and B. Benmokrane, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p606-617.

Thomas D. White, ed., 1992), p606-617.

Passive Inclined Anchorages in Sand, James D. Geddes and E. J. Murray, GT May 91, p810-814.

Pullout Stiffness of Elastic Anchors in Slope Stabilization Systems, Roman D. Hryciw and Masyhur Irsyam, GT June 92, p902-919.

Regolith Mechanics, Dynamics, and Foundations, Mohammed M. Ettouney and Haym Benaroya, AS Apr. 92, p214-229.

Seismic Response of Multianchored Retaining Walls, Thomas J. Siller and Dorothy D. Frawley, GT Nov. 92, p1787-1803.

imber Crib-Faced Soil-Nailed Retaining Wall, James G. Collin, Mohammed A. Gabr and Alan G. MacKinnon, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1457-1463.

Uplift Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaly, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

Kinematics of 2-D Transient Water Waves Using Laser Doppler Anemometry, Cheung H. Kim, Robert E. Ran-dall, Sung Y. Boo and Martin J. Krafft, WW Mar./Apr. 92, p147-165.

Measured Internal Kinematics for Shoaling Waves with Theoretical Comparisons, M. W. Griffiths, W. J. Eas-son and C. A. Greated, WW May/June 92, p280-299.

Recent Wave Kinematics Experimental Studies, R. E. Randall, J. Zhang, C. A. Spell and J. K. Longridge, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p607-621.

Velocity Profiles in Steep Open-Channel Flows, / Tominaga and lehisa Nezu, HY Jan. 92, p73-90.

Stitch Spacing and End Fixity in Seismic-Resistant Boxed Angle Braces, Farhang Aslani and Subhash C. Goel, ST Oct. 92, p2872-2889.

Anion exchange Removing Selenium(IV) and Arsenic(V) Oxyanions with Tailored Chelating Polymers, Anuradha Ramana and Arup K. Sengupta, EE Sept./Oct. 92, p755-775.

Anisotropic materials

Antiplane Problems of Monoclinic Material, Chien-Ching Ma, EM Sept. 92, p1765-1782.

Failure Prediction of Anisotropic Material, Photios P. Papados and Paul N. Roschke, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1012-1015.

Anisotropic plates
Three-Dimensional Solutions for Thermal Buckling of
Multilayered Anisotropic Plates, Ahmed K. Noor and
W. Scott Burton, EM Apr. 92, p683-701.

Anisotropic shells
Family of Iterative Shear-Deformation Theories for Shallow Shells, Zenon Rychter, EM Nov. 92, p2159-2175.

Anisotropic soils

Anisotropic Hardening Plasticity Model for Sands,
Robert Y. Liang and Hann-Ling Shaw, GT June 91,

Elastic-Plastic Analysis of Footings on Anisotropic Soils, A. Nanda and T. Kuppusamy, GT Mar. 92, p428-448. Modeling Anisotropy of Clays at Critical State, S. The-vanayagam and J.-L. Chameau, EM Apr. 92, p786-806.

Ultimate Bearing-Capacity Tests on Sand with Clay Layer, Masanobu Oda and Soe Win, GT Dec. 90, p1902-1906.

Anisotropy

Analysis of Recharge in Anisotropic, Layered, Saturated-Unsaturated Soil, Abolfazl Shamsai and Miguel A. Mariño, IR July/Aug. 92, p584-600.

Anisotropic Behavior of Cement-Grouted Sand, Ray-mond J. Krizek and Maan Helal, (*Grouting, Soil Im-*provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p541-

Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. 1: Theory, Robert Y. Liang and Fengang Ma, GT Feb. 92, p229-245.

Anisotropic Plasticity Model for Undrained Cyclic Be-havior of Clays. II: Verification, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p246-265.

Constitutive Behavior of Stress-Induced Anisotropic Co-hesive Soil, Jeff S. Budiman, Stein Sture and Hon-Yim Ko, GT Sept. 92, p1348-1359.

An Elasticity Solution for a Transversely Isotropic Mate-rial Containing a Spherical Shell Under Arbitrary Axi-symmetric Loading, J. -Y. Wang and S. M. Henrich, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1020-1023.

Experimental Investigation of Bending and Twisting Coupling in Thin-Walled Composite Beams, Lawrence C. Bank and Steven J. Smith, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p884-887.

Numerical Study of Soil Anisotropy, A. Anandarajah, EM Jan. 92, p211-216.

Postbuckling Response Simulations of Laminated Aniso-tropic Panels, Ahmed K. Noor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Response of Cross-Anisotropic Seabed to Ocean Waves, Behrouz Gatmiri, GT Sept. 92, p1295-1314.

Stability Evaluation During Staged Construction, Charles C. Ladd, GT Apr. 91, p540-615.

A Theoretical Approach to Characterize Reinforced Concrete Using Stress Waves, J. S. Popovics, J. L. Rose and A. Pilarski, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 949-504.

Seas, Antarctica, Dieter Beike, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p341-355.

Antennas
Concept for a Lunar Array for Very Low Frequency
Radio Astronomy, Kenneth A. Marsh, Michael J.
Mahoney, Thomas B. H. Kuiper and Dayton L. Jones,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1935-1940.

proximation

Approximation

AASHTO Direct Structural Capacity Method Error Analysis, Ronald L. Baus and Andrew M. Johnson, TE Jan.Feb. 92, p20-32.

An Advanced First-Order Method for System Reliability, Sankaran Mahadevan and Thomas A. Cruse, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p487-490.

Numerical Methods 101—Convergence of Numerical Models, David B. Thompson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhowmik, ed., 1992), p398-403.

1992), p398-403.

Approximation methods
Approximation Lateral Stiffness of Stories in Elastic Frames, Arturo E. Schultz, ST Jan. 92, p243-263.

Beam Strength Enhancement at Design Ductility Factor Demands, Gaetano Russo, ST Dec. 90, p3402-3416.

First-Passage Failure Predictions for Yielding Primary-Secondary Systems, David C. K. Chen and Loren D. Lutes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p564-567.

Nonlinear Impact and Chaotic Response of Slender Rocking Objects, Solomon C. S. Yim and Huan Lin, EM Sept. 91, p2079-2100.

Point-Estimate Method for Calculating Statistical Moments, K. S. Li, EM July 92, p1506-1511.

Aquaculture

A Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, M. L. Spaulding, K. Jayko, T. Isaji, E. L. Anderson, E. Howlett, J. C. Swanson, D. Mendelsohn and S. Puckett, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175.

Modeling Dredged Material Disposed in Open Water, B. H. Johnson, D. N. McComas and D. C. McVan, (H)draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1036-1041.

Aquatic habitats
Global Climate Change Effects on Water Quality, G. K.
Meyer and G. T. Orlob, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992), p19-24

Habitat Simulation in United States, Britain, and France, Robert T. Milhous, Ian Johnson, Yves Souchon and Sylvie Valentin, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p362-252.

Perceptions, Sensitivity, and Solutions; Water Quality 2000, John B. Pearce, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-43.

diment and Aquatic Habitat in River Systems, ASCE Task Committee on Sediment Transport and Aquatic Habitats, Sedimentation Committee, HY May 92, p669-687.

quatic plants
ield-Measured Hydraulic Resistance Characteristics in
Vegetation-Infested Canals, Mohamed F. Bakry, Timothy K. Gates and Ahmed F. Khattab, IR Mar./Apr. 92,
p256-274.

p230-274. Modified QUAL2E Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, Rex A. Tolman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p194-199.

Aqueducts

Application of Monthly Model of Los Angeles Aqueduct
System to Investigate Impacts from Mono Lake Tributary Diversions, Russ T. Brown and William R.
Hutchison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed. 1992), p10421048.

Design of Flood Protection for Transportation Alignments on Alluvial Fans, Richard H. French, IR Mar./ Apr. 92, p320-330.

Aquifer characteristics
Drawdowns for Constant-Discharge One-Dimensional
Leaky Aquifer, Louis H. Motz, IR May/June 90, p456-

Indicator Variography for Spatial Characterization of Aq-uifer Heterogeneities, M. V. Cromer and R. M. Sriva-tava, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p420-425.

Computer-Aided Characterization of Wellfield-Testing Results in Basalts, J. A. Paschis, J. R. Kunkel and T. D. Steele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p475-480.

Aquifers

3H and <sup>14</sup>C as Tracers of Ground-Water Recharge, John

A. Izbicki, Robert L. Michel and Peter Martin, (Irrigation and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p122-127.
Applying the ARMOS and MOFAT Models to a Major
Oil Spill, Otto J. Helweg, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
\*\*24.509.

Climatic Change and Ensuing Risks Facing Water Resources Managers, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p52-66.

Connecticut's Wellhead Protection Program, Fred S. Banach, (trigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p92-97.

1992), p92-97.

Critical Public Issues for Well Head Protection, Daniel J. Van Abs. (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p274-279.

Development of the San Fernando Basin Groundwater Flow Model, Shih-Huang Chieh, Kelli A. Shuter and Melin M. Ozbilgin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p248-253.

Drawdowns for Constant-Discharge One-Dimensional Leaky Aquifer, Louis H. Motz, IR May/June 90, p456-

Drawdowns for Nonleaky Aquifer Flow with Storage in Finite-Width Sink, Louis H. Motz, IR July/Aug. 92,

p645-651.

From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314.

Groundwater Management in Southern Florida, Mark M. Wilsnack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ened Resource-In 2 ed., 1992), p104-109.

Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.

Managing Water Supply with Aquifer Storage and Recovery, Thomas J. Buchanan and Margaret A. Ibison, (Water Resources Planning and Management Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p426-431.

mad Karamouz, ed., 1992, p426-431.

Migration of Chloroform in Aquifers, Sergio E. Serrano,
EE Mar./Apr. 92, p167-182.

Migration of Spilled Oil from Ruptured Underground
Crude Oil Pipelines in the Memphis Area, Otto J.

Helweg, (Lifetine Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), tral and E

New Approaches for Regional Ground-Water Modeling in Southern Nevada, A. Keith Turner and Kenneth E. Kolm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p852-858.

Optimal Aquifer Management for Controlling Land Sub-sidence, Theodore G. Cleveland and Lu-Chia Chuang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p872-877.

Optimal Capacity Expansion in Multi-Aquifer Systems, Hasan Yazucgii, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p432-

438

Plume Movement and Mixing in Heterogeneous Aquifer, Salwa Rashad, John Hoopes, Craig Fergusson and Tswn-Syau Tsay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jeanings, ed. and Nani G. Bhowmik, ed., 1992), p180-196

185.

Potential Flow Solution for Ground Water Mounding, Tswn-Syau Tsay, John Hoopes, Craig Fergusson and Salwa Rashad, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p704.

A Preliminary Evaluation of Transport Mechanisms for Multiple Substrates in a Laboratory Column System, Zhihuai Xue and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p180-185.

Quasi-Three-Dimensional Optimization Model of Jakarta Basin, Brad A. Finney, Samsuhadi and Robert Willis, WR Jan./Feb. 92, p18-31.

Willis, WR Jan./Feb. 92, p18-31.

Reduced Recharge Capacity of a Pump and Treat System, Cynthia L. Teeter, Douglas Gunnison, Norman R. Francingues, Jr. and Mark E. Zappi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p197-1203.

Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineerings: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p98-103.

Scheduling of Ground Water Pumpage in Alluvial Aquiers to Minimize the Impact on Surface Water Diversions, John C. Tracy and Munied Al-Sharif, (Water Resources—In Search of Solutions, Mohammad Karamouz, ed., 1992), p79-83.

Simulating Solute Transport Using Laboratory-Based

Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Sem-prini and Paul V. Roberts, EE Sept./Oct. 92, p666-689.

Type Curves for a Slug Test in an Infinitely or Semi-infinitely Thick Aquifer, Gary R. Chirlin, (Symposium on Ground Water, Gerard P. Lennon, ed. and Shakrokh Rouhani, ed., 1991), p169-174.

Use of D-C Resistivity to Map Saline Ground Water, Christina L. Stamos, Steven K. Predmore and Adel A. R. Zohdy, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ened Resource-Incd., 1992), p80-85.

Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Ran-dall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-286.

Water Reuse to Gain Water Rights for Hays, Kansas, H. Wayne Gresh and Jeffrey W. Henson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p55-60.

Aramid

Bond Anchorage of Pretensioned FRP Tendon at Force Release, Antonio Nanni, Masaharu Tanigaki and Koi-chi Hasuo, ST Oct. 92, p2837-2854.

chi Hasuo, 31 Cett. 92, p2837-2834. Hybrid (FRP-Steel) Reinforcement for Concrete Structures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materials: Performance and Prevention of Desciencies and Failures, Thomas D. White, ed., 1992), p655-665. Properties of Aramid-Fiber Reinforced Concrete and SIF-CON, Antonio Nanni, MT Feb. 92, p1-15.

Arbitration

Arbitration Doesn't Conflict with Courts, CE Nov. 92, p30

Opportunities and Constraints for the Innovative Geo-technical Contractor, Peter J. Nicholson and Donald A. Bruce, (Excavation and Support for the Urban Infra-structure, T. D. O'Rourke, ed. and A. G. Hobelman, ed. 1992), p46-64.

Resolving Construction Disputes by Mediation: Hong Kong Experience, Kwok-Wing Chau, ME Oct. 92,

indbridge Virginia Oceanfront Seawall Arbitration Hearing: Some Lessons Learned for Coastal Engineers, David R. Basco, Robert A. Dolan and Carter Sinclair, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p1003-1020.

Art turnace (EAF) Slag as an Aggregate in Asphalt Concrete, Kit M. Lum, Yiik-Diew Wong and Soo-Loi See, (Utilization of Waste Materials in Civil Engineering Construction, Hilary J. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p240-249.

Arches

Designing Reinforced Rock, John A. Bischoff, Stephen J. Klein and Thomas A. Lang, CE Jan. 92, p64-67. Low-Order Interpolation Functions for Curved Beams, S. J. Pantazopoulou, EM Feb. 92, p329-350.

Stability of Masonry Piers and Arches, Thomas E by and Colin B. Brown, EM Feb. 92, p367-383.

Architect/engineers
A Contractor, Acting as an A/E, Can Lose Coverage, CE Sept. 92, p32.

Architecture

An Agenda for AEC PDES Research, Jason P. Heroux,
Douglas J. Peters, William J. Rasdorf and John W.
Baugh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno,
ed. and Jeff R. Wright, ed., 1992), p376-385.

The Application of Open System Architecture to Planetary Surface Systems, D. A. Petri, L. A. Pieniazek and
L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p469-482.

Architectures for Mission Control at the Jet Propulsion
Laboratory, Roger A. Davidson and Susan C. Murphy,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1567-1578.

Call for Nominations for Bard Awards, CE Apr. 92, p10.

Call for Nominations for Bard Awards, CE Apr. 92, p10. For Building Designers, Déjà Vu Can be Costly, CE Apr. 92, p19-20.

Green Architecture: Designing an Ecologically Sound Dwelling, Reinhard Kanuka-Fuchs, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

nar Base Requirements for Human Habitability, Gary T. Moore, Kerry L. Paruleski, Janis Huebner-Moths, Joseph P. Fieber and Patrick J. Rebolot, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p224-239.

Mars Via the Moon.—A Robust Lunar Resources-Based Architecture, Ed Repic and Wally McClure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p.1603-1630.

Object Oriented Spacecraft Architecture, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2328-2337.

Miller, ed., 1972, p. 23.6-23.

An Operational Evaluation Process for Long-Duration Mission Habitats in Space, M. Novara, E. Raffner and D. Antonelli, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Planning for Construction Automation by Integrating In-formation Flow with Software and Hardware Controls, Amarjii Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p85-863.

SEI In-Space Operations and Support Challenges, Ronald Caldwell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1476-1487.

Technical Issues for Lunar Base Structures, Brent Sher-wood and Larry Toups, AS Apr. 92, p175-186.

Environmental Effects of Beaufort Sea Causeways, J. M. Colonell, B. J. Gallaway and A. W. Niedoroda, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974.

Area redevelopment
Circulation Issues and Impacts—Corridor Redevelopment Santa Ana, CA—A Case Study, T. C. Sutaria and
Abi Mogharabi, (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui
Rouphail, ed. and T. C. Sutaria, ed., 1992), p223-227.

Colgate Palmolive Transportation Impact Case Study, Martin J. Wells and Jay S. Bockisch, (Site Impact Traf-fic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p154-158.

Defining Traffic Impacts of Redevelopment, Peter M. Za-bierek, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p195-199.

Transportation Management in the Anacostia Waterfront Washington, D.C. Louis J. Slade, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p159-163.

Arid lands

New Look at Regional Flood-Frequency Relations for Arid Lands, Hjalmar W. Hjalmarson and Blakemore E. Thomas, HY June 92, p868-886.

Performance of Recycled Asphalt Concrete Materials in an Arid Climate, Mustaque Hossain and Larry A. Sco-field, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p415-427.

Preferred Directions of Flow on Alluvial Fans, Richard H. French, HY July 92, p1002-1013.

Arizona's Metropolitan Travel Reduction Programs, Elizabeth K. Burns, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p76-84.

Quaity, Roger L. Wayson, etc., 1992, p70-04. Arizona's Uniform Traffic Impact Procedures, Peter M. Lima and Eric Kalivoda, (Site Impact Traffic Assess-ment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p94-

Bringing Ecology to the Classroom, CE Jan. 92, p11.

Evaluation of Expansive Clay Soils in Tucson, Arizona; Mark W. Brooks and Edward A. Nowatzki, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p220-223.

Social-Economic Impacts of the October 1983 Flood in Pima County, Arizona, David A. Smutzer, (Hydraulic Engineering: Saving a Threatened Resource—In Seal Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1072-1075.

Wildlife, Water Shortage Affect Airport Project, CE Feb.

Arkanaa
Earthquake Hazard Investigative Procedures for Central
United States Waterworks, James R. Blacklock, (Lifeline Earthquake Engineering in the Central and Eastern
U.S., Donald B. Ballantyne, ed., 1992), pl-15.
Ground Water Management in Arkanass, Jonathan Ray
Sweeney and A. Mark Bennett, III, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), pl 10-115.

Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), pl.10-115.

Armor units

Application of a Dolos Structural Design Procedure, Jeffrey A. Melby, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p83-08-46.

Armor Stability on Submerged Breakwaters, Miguel Losada, Nobuhisa Kobayashi and Francisco L. Martín, WW Mar./Apr. 92, p207-212.

The Assessment of Armourstone for Shoreline Protection, R. Koopmans and R. B. Watts, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p82-94.

A New Concrete Armor Unit for Breakwaters: The "Beta Block", José Maria Berenguer, Vicente S. Naverac and José Manuel de la Peña, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p69-6-78.

Physical Model Testing of Broken Armor Stone, Donald L. Ward, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p34-39.

Problems With Armor-Stone Quality on Lakes Michigan, Huron, and Erie, Richard J. Lutton and Ronald L. Erickson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p115-136.

Stability of Accropode(R) and Comparison with Parallelepipedic Block, Braulio G. Madrigal and José Lozano, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p704-717.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Gradings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p704-717.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Gradings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p704-717.

Magoon, ed. and William F. Baird, ed., 1992), p704-717.

Magoon, ed. and William

Army
The Army Aviation Team from a Military Civil Engineer's Perspective, Paige E. Johnson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), 972-108.

Army Water Supply Management System for Installations Drinking Water Facilities, Hany H. Zaghloul, Fadi A. Karaa, Jocelyn Clark and Matthew Korfist, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p145-152.
Contaminant Groundwater Interception—RMA, S. Paul Miller and William L. Murphy, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1171-1176.

Expert System for Wastewater Collection System Infiltra-

ed., 1992), p.1171-1176.

Expert System for Wastewater Collection System Infiltration and Inflow Mitigation, Fadi A. Karaa, Hany H.
Zaghloul and Richard Scholze, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p.121-128.
Facility Management System for Buildings, Edgar Samuel
Neely, Jr. and Robert Neathammer, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p.129-136.
FM—An Educated, Integrated Approach, Sine Hill, Cyn-

Ed., 1972), p129-130.
FM—An Educated, Integrated Approach, Sine Hill, Cynthia Hallman and Richard Berner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p33-40.

1992, p33-90. Group Prioritization System for Army Military Construction, Bruce C. Goettel, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p49-56.

Removal of Extremely Low Levels of Munitions in a Drinking Water Supply, R. Mark Bricka and Wayne Sharp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1190-1196.

Aromatic hydrocarbons
Inducer Compounds in the Enricher-Reactor Process,
Roger W. Babocok, Jr., Chwen-Jeng Tzeng, Simlin Lau
and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p468-473.

Arseale
Removing Selenium(IV) and Arsenic(V) Oxyanions with
Tailored Chelating Polymers, Anuradha Ramana and
Arup K. Sengupta, EE Sept./Oct. 29, p755-775.
Use of GIS Technology for the Analysis and Visualization
of Arsenic Concentration in Soils, Irene Findikaki,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p443-451.

Arterial highways

Access Management—Myth or Reality, Herbert S. Levinson and Frank J. Koepke, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p62-

Artesian aquifers
Drawdowns for Nonleaky Aquifer Flow with Storage in
Finite-Width Sink, Louis H. Motz, IR July/Aug. 92,

pods-5031. Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.

Bhowmik, ed., 1992), p778-783.

Artificial intelligence
Al Supported Process Planning for Automated Rebar Fabrication, Md. Salim and Leonhard E. Bernold, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p872-879.

Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, 0-8726-2869-8, 1260pp.

Frame-Based Representation, Mary Lou Maher and Priti Vora, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p60-79.

Fuzzy Measures in the Knowledge Based Diagnosis of Scismic Vulnerability of Masonry Buildings, Alberto Bernardini, Roberto Gori and Claudio Modena, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28.

Graphical Object-Oriented Simulation System for Construction Process Modeling, L. Y. Liu and P. G. Ioannou, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1139-1146.

Implementing Uncertainty Treatment in Al Development Fabic Casciati and Debbie Liu, (Probabi-

and Jeff R. Wright, ed., 1992), pl 139-1146.

Implementing Uncertainty Treatment in Al Development Environment, Fabio Casciati and Debie Liu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), pl7-20.

Inductive Learning of Bridge Design Knowledge, Yoram Reich and Steven J. Fenves, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), pl69-189.

Inductive Learning of Wind Bracing Design for Tall Buildings, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), pl90-203.

Intelligent Retrieval System for Conditions of Contract

Intelligent Retrieval System for Conditions of Contract Documents in Construction, Ayman A. Morad and Luis Arditi Rocha, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p737-745.

p737-745.

Knowledge Elicitation Strategies and Experiments Applied to Construction, Jesus M. De La Garza and C. William Ibbs, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p69-85.

Knowledge Representation: An Overview, Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p1-14.

Knowledge-Based Modeling of Material Behavior with Neural Networks, J. Ghaboussi, J. H. Garrett, Jr. and X. Wu, EM Jan. 91, p132-153.

Machine Learning in Knowledge Acquisition, Tomasz Arciszewski and Wojciech Ziarko, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p30-68.

Machine Learning in Planning and Control, Shaopei Lin, Zhenyi Zhao and Yingjian Soong, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p991-998.

Neural Networks, J. H. Garrett, Jr., J. Ghaboussi and X. Wu, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p104-143.

Neuroform—Neural Network System for Vertical Formwork Selection, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, CP Apr. 92, p178-199.

Path-Finder: Al-Based Path Planning System, A. A. Morad, A. B. Cleveland, Jr., Y. J. Beliveau, V. D. Fransisco and S. S. Dixit, CP Apr. 92, p114-128.

Qualitative Evaluation of Preliminary Structural Designs, Luis M. Bozzo and Gregory L. Fenves, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p89-96.

SightPlan Model for Site Layou, I. D. Tommelein, R. E. Levitt and B. Hayes—Roth, CO Dec. 92, p749-766.

Symposium, Barry J. Goodno, ed. and Jeff R. Wright, Ci., 1992), p89-96.

SightPlan Model for Site Layou: 1. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

Skull Object Space: Essential Knowledge Typologies for Proprietary Brand Name or Equal Specifications Interpretation, Jesus M. De La Garza and Gaye A. Oralkan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-622.

Spatial and Temporal Aspects of Qualitative Structural Reasoning, David I. Schwartz and Stuart S. Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p277-284.

Text and Reference Books on Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p270-241.

Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, Walid Y. Thabet, Ayman A. Morad and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p277-736.

Artificial Islands.

Artificial island

Artificial Islands
Design Considerations for Small Artificial Islands in
Franks Tract, California, Craig H. Everts, Vedat
Demirel, Russell H. Boudreau, Emy T. Carpenter and
Richard Dornhelm, (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), p.779-793.
Fly-Ash Slurry Island: I. Theoretical and Experimental Investigations, Sumio Horiuchi, Massataka Taketsuka,
Takuro Jdawara and Hiromi Kawasaki, MT May 92,

p117-133.
Ply-Ash Slurry Island: II. Construction in Hakucho Ohashi Project, H. Kawasaki, S. Horiuchi, M. Akatsuka and S. Sano, MT May 92, p134-152.
New Seoul Metropolitan Airport, William H. Small, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p155-162.

Artificial recharge
Analysis of Recharge in Anisotropic, Layered, SaturatedUnsaturated Soil, Abolfazi Shamsai and Miguel A.

Omsaturated Soil, Aboltazi Shamsai and Miguel A. Mariño, IR July/Aug. 20, p584-600.

Artificial Recharge Feasibility Evaluation by Field Investigation, Maury E. Ford, Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Scott Keys, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647.

Asbestos
Asbestos Melting, Reuse Could Ease Landfill Demand,
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**ASCE Activities** 

ASCE Indonesia Group Holds Its First Seminar, CE Oct. 92, p70.

ASCE Should Have a Construction Safety Committee, C. E. Jackson, Jr., El Jan. 92, p36-59. ASCE Sponsors Fifth International Civil Engineering Round Table, NE Nov. 92, p15.

Engineer Practitioners on Campus; ASCE Program is Off to a Good Start, NE Oct. 92, p1,9.

In New York, Cooperation Agreements Signed with Four Engineers' Groups, NE Nov. 92, p15. Infrastructure Group Adds Up Pluses for Year, CE Sept.

92, p78.

Milwaukee Summer Institute Gives Students CE Project Experience, CE Feb. 92, p70,72. Postconvention Trip Slated for Bermuda in September,

Postconvention Trip Slated for Bermuda in September, CE May 92, p78.

Probabilistic Mechanics in Civil Engineering, James T. P. Yao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p42-50.

Prospects for Clean Water Bill Hold Center Stage at Seventh Civil Engineering Summit, NE July 92, p1, 4.

Time to Nominate for Hoover Medal, CE Dec. 92, p75-

ASCE Awards & Prizes 16 Projects Nominated for 1992 OCEA, CE Apr. 92, p68. And the OCEA Winner for 1992 Is..., NE June 92, p.15.
ASCE Awards \$58,000 in Study Grants to Civil Engineering Students, NE Oct. 92, p.10.

ing Students, NE Oct. 92, p10.

ASCE Nashville Branch Involved in U.S. Science Fair,
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ASCE National Awards Presented at Society's New York
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California State University, Fullerton Students Roar
Back to Capture Top Chapter Prize; Four Others Earn
Vice Presidents' Awards for Outstanding Activities,

NE Oct. 92, p7. Correction, CE Feb. 92, p72.

Development of Bed Features, Arved J. Raudkivi and Hans-H. Witte, HY Sept. 90, p1063-1079.
The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

sept. 91, p.380-392.
Future Trends and Needs in Hydraulics, Daryl B. Simons, HY Dec. 92, p1607-1620.
Is It Good Business to Be a Citizen Engineer? Brent A. Campbell, CE Oct. 91, p54-55.
The Mechanical Aging of Soils, John H. Schmertmann, GT Sept. 91, p1288-1330.

Politics and Engineering, Robert P. Cannon, CE Dec. 91, p69-70. Postdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115.

ASCE Board of Direction

ASCE, Board of Direction
1992 Ballot for National Officers Set for July ASCE
News, CE Apr. 92, p68.
ASCE Board Says Yes to Move, No to Certification for
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ASCE Board Takes Action on Ethical Concerns, CE Aug.

92, p67.

Board Meets in Orlando During ASCE Convention, CE Jan. 92, p70,73-74.

Jan. 92, p70,73-74.
Group Gets Board Backing for Policies of Benefit to Government Engineers, CE May 92, p80-81.
Members Voice Concern on ASCE's Certification Plan for Engineers, NE Feb. 92, p1.
New Policies Adopted by ASCE Board, NE Nov. 92, p3.
Professional Conduct Actions Taken by ASCE in 1991,

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ASCE Code of Ethics ASCE Board Takes Action on Ethical Concerns, CE Aug. 92, p67.

ofessional Conduct Actions Taken by ASCE in 1991, CE May 92, p80.

ASCE Committe ASCE's 1992 Official Register Available, CE Feb. 92,

p73.
COER Wants You, CE May 92, p78,80.
Computational Model Verification Test Case Using Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p436-441.

Draft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Torseth, ed., 1992), p939-1000.

Draft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwaters, ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Ennio DeCurtis, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Douglas Sethness, Jr.), (Ports '92, David Torseth, ed., 1992), p1001-1069.

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE

1992), p1001-1059.

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE Ports and Harbors Task Committee (Paper Prepared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster), (Ports '92, David Torseth, ed., 1992), p1070-1151.

Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230.

Metrication and Building Products: Soft or Hard Conversion, NE June 92, p13.

New ASCE Standards Activities Under Way, CE Sept. 92, p78,80.

p78,80.

p78,80.

Planning and Design Guidelines for Small Craft Harbors,
ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik), (Ports '92, David Torseth,
ed., 1992), p937-938.

Planning and Design Guidelines for Small Craft Harbors—Economics and Finance, ASCE Ports and Harbors Task Committee (Paper Prepared by Lawrence E.
Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports
'92, David Torseth, ed., 1992), p1152-1183.

Practitioners Return to Campus for Second Year of
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p116.

Task Committee Report on Urban Hydrology Chapter, David F. Kibler, A. Osman Akan, Christopher B. Burke, Mark W. Glidden, Gert Aron, Richard H. McCuen and Andrew J. Reese, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p725-728.

Up the River in a (Concrete) Canoe, CE Mar. 92, p76.

What Should the ASCE Model Water Code Committee Do? Leonard Shabman, (Water Resource» Flanning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p237-241.

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mmary of Responses to Participant Questionnaire, Fifth Engineering Foundation Conference on Risk-Based Decisionmaking in Water Resources, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p360-371.

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**ASCE Professional Division** ASCE Professional Divisions
Probabilistic Mechanics in Civil Engineering, James T. P.
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John M. Nieuzweck, ed., 1792), pa2-30.

ASCE Publications

1992 Ballot for National Officers Set for July ASCE News, CE Apr. 92, p68.

ASCE Annual Combined Index—1991, American Society of Civil Engineers, Publications Division, 1992, 0-87262-886-8, 1036pp.

ASCE Newsletter Needs Reviewers, CE June 92, p11.

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ASCE Review and Publication Process for Technical Journals, Otto J. Helweg and William W-G. Yeh, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p3-7.

ASCE's 1992 Official Register Available, CE Feb. 92, p73. ASCE's Computing Newsletter Covers All Bases, CE Oct.

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How to Improve Writing Skills, Otto J. Helweg, (Irrigation and Drainage: Saving a Threatened Resource—I Search of Solutions, Ted Engman, ed., 1992), p13-18.
Latest ASCE Salary Index is Released, CE May 92, p78.
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Status of ASCE Handbook of Hydrology, Thomas P. Wootton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p448-451.
Transactions of the American Society of Civil Engineers—1991, vol. 156, American Society of Civil Engineers, Publications Division, 1992, 0-87262-883-3, 694pp.
What Makes a Quality Paper? James A. Liggett, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p8-12.

ASCE Salaries and Fees Latest ASCE Salary Survey Shows Upward Trend, NE Mar. 92, pl.

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ASCE Technical Divisions
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Probabilistic Mechanics in Civil Engineering, James T. P. Yao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p42-50.

John M. Niedzwecki, ed., 1992), p42-50.
Status of ASCE Handbook of Hydrology, Thomas P. Wootton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p448-451.
Survey of and Classification Criteria for Most Commonly Used Groundwater Models, Lakshmi N. Reddi, C. Harold Emmett, Daniel E. Medina and R. Lee Peyton, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p575-580.

ASCE Younger Members
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MSW Incinerator Ash as Aggregate in Concrete and Ma-sonry, Rosmadi Abdul Rashid and Gregory C. Frantz, MT Nov. 92, p353-368.

Resolving Environmental Concerns: Ash Beneficial Re-use, Richard W. Goodwin, Utilization of Waste Mate-rials in Civil Engineering Construction, Hilary I. In-yang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31.

A Study on the Utilization of Incinerator Residue for Asphalt Concrete, Kit M. Lum and Joo-Hwa Tay, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p217-229.

Son, co., 1722, pa11-222.
Subsurface Characterization and Design of an Ash Land-fill on Varved Clays, Siamac Vaghar, Stanley M. Bemben and Markus Walbaum, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803.

### Asphalt cement

Electric Arc Furnace (EAF) Slag as an Aggregate in As-phalt Concrete, Kit M. Lum, Yiik-Diew Wong and Soo-Loi See, (Utilization of Waste Materials in Civil Engineering Construction, Hillary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p240-249.

A Study on the Utilization of Incinerator Residue for Asphalt Concrete, Kit M. Lum and Joo-Hwa Tay, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p217-229.

The Use of Phosphogypsum-Based Slag Aggregate in Hot Mix Asphaltic Concrete, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p.202-216.

Utilization of Carbide Lime Waste in Asphaltic Concrete Mixes, Mohammed H. Al-Sayed, Ismail M. Madany and W. Al-Khaja, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p230-239.

Asphalt deterioration

Cures: A Knowledge-Based Systems Approach, Maqbool A. Khatri, Sivand Lakmazaheri, E. Ray Brown and Prithvi S. Kandhal, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p317-324.

Asphalt mix desig

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Investigating Hot Mix Asphalt Segregation Causes and Cures: A Knowledge-Based Systems Approach, Maqbool A. Khatri, Sivand Lakmazaheri, E. Ray Brown and Prithvi S. Kandhal, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p317-324.

Physicochemical and Rheological Properties of Microwave Recyled Asphalt Binders, Laurand H. Lewandowski, Rogers Graham and Jim Shoenberger, (Marias: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p449-461.

Road Aggregate Choice Based on Silicate Quality and Bi-tumen Adhesion, Petri V. Peltonen, TE Jan./Feb. 92, p50-61.

The Use of Phosphogypsum-Based Slag Aggregate in Hot Mix Asphaltic Concrete, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p202-216.

Bergeson, ed., 1992), p.202-216.
Utilization of Carbide Lime Waste in Asphaltic Concrete Mixes, Mohammed H. Al-Sayed, Ismail M. Madany and W. Al-Khaja, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p.230-239.
Variations in Measured Resilient Modulus of Asphalt Mixes, Faisal H. Al-Sugair and Jamal A. Almudaiheem, MT Nov. 92, p.343-352.

Waste Glass and Sewage Sludge Frit Use in Asphalt Pave-ments, Warren H. Chesner, Utilization of Waste Mate-rials in Civil Engineering Construction, Hilary I. In-yang, ed. and Kenneth L. Bergeson, ed., 1992), p296-307.

Asphalt pavements
Asphalt pavements
Asphalt pavements
Application of SMA Technology in Georgia, Robert
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Evaluation of Fine Aggregate Particle Shape and Texture,
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(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), p216-230.
In-situ Stress and Strain Measurements in Dynamically
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Robert A. Eaton, ed., 1992), p244-260.
Investigating Hot Mix Asphalt Segregation Causes and
Cures: A Knowledge-Based Systems Approach,
Maqbool A. Khatri, Sivand Lakmazaheri, E. Ray
Brown and Prithvi S. Kandhal, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p317-324.
Pavement Surface Maintenance: Overview of SHRP H106 Experimental Installations. Russell Romine, David

1992), p317-324.

Pavement Surface Maintenance: Overview of SHRP H106 Experimental Installations, Russell Romine, David
Peshkin, Kelly Smith and Tom Wilson, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p146-159.

Performance of Recycled Asphalt Concrete Materials in
an Arid Climate, Mustaque Hossain and Larry A. Scofield, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),
p415-427.

Scran Tires Used in Rubber-Modified Ambalt Bound

Scrap Tires Used in Rubber-Modified Asphalt Pavern rap Tires Used in Rubber-Modified Asphalt Pavement and Civil Engineering Applications, Michael Blumenthal and Joseph L. Zelibor, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p182-192.

uccessful High Traffic Chip Seal Construction, Scott Shuler, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p186-205.

p186-205.

Technologies for Utilization of Waste Tires in Asphalt Pavement, William E. Eleazer and Morton A. Barlaz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p193-201.

Technology Issues for Enhancing Waste Material Utilization in Highway Construction Addressed by the SHRP-IDEA Program, K. Thirumalai, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p1-8.

Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, p.1-8.
Terminal Asphalt Patching: An Innovative Approach, C. Davis Rudolf, III. and George Degaraff, (Ports '92, David Torseth, ed., 1992), p836-848.
Waste Glass and Sewage Sludge Frit Use in Asphalt Pavements, Warren H. Chesner, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p296-307.

Asphalis
Asphalis
Asphalis
Application of SMA Technology in Georgia, Robert Ronald Collins and Steve Fernand Valdez, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p160-171.
Fingerprint Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluorescence, Daniel York Pharr, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p579-584.
A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Additives, W. Virgil Ping and Thomas W. Kennedy, (Materials: Performance and Prevention of Deficiencies and Failures; Thomas D. White, ed., 1992), p260-215.
Pavement Improvement with Asphaltic Membranes, Ilan Ishai, Nathan Livnat and Moshe Livneh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1667-1079.

The SHRP-LTPP Asphalt Resilient Modulus Pilot Study, William O. Hadley and Jonathan L. Groeger, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl 30-145.

Assessments
Alternative Cask Maintenance Facility Concepts, an Update and Reassessment, C. R. Attaway, L. G. Medley, R. B. Pope, L. B. Shappert and A. C. Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 336–1342.

17921, p1336-1342.
Application of Fracture Mechanics Methodology to Assessment of Weld Defects in Offshore Platforms, T. M. Hsu, E. W. Carter, S. L. Fu and J. S. Mitchell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p733-749.

1722, pr. 133-149.
Considerations in Managing the Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. W. Dormuth, P. A. Gillespie and S. H. Whitaker, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pp. 1737-1742.

p)1737-1742.
Corrosion Lifetime Assessment for Candidate Materials of Geological Disposal Overpack for High-Level Nuclear Waste Canisters—Perspective of R&D in Japan, Hidekazu Asano, Hisao Wakamatsu and Masatsune Akashi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1658-1669.
Natural Analogues: The State of Play in 1992, Neil A. Chapman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1695-1700.
Taking Account of the Biosphere in HLW Assessment, Graham M. Smith and Helen A. Grogan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2306-2312.

Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), pl 298-1302.

Astrogeology
Behavior of Compacted Lunar Simulants Using New
Vacuum Triaxial Device, Chandra S. Desai, Hamid
Saadatmanesh and Thomas Allen, AS Oct. 92, p425-

Astronomical photography
The Lunar Transit Telescope (LTT): An Early Lunar
Based Science and Engineering Mission, John T.
McGraw, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1855-1879.
Operations Analysis for a Large Lunar Telescope, Christopher Thyen, (Engineering, Construction, and Operations in Space III, Will Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p1591-1602.

Astronomy
Altering the Solar System—Landing the Moon, Mars or Venus on the Earth—Changing the Orbit, the Tilt and the Size of the Planet Earth, Alexander Abian, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2231-2240.
Concept for a Lunar Array for Very Low Frequency Radio Astronomy, Kenneth A. Marsh, Michael J. Mahoney, Thomas B. H. Kuiper and Dayton L. Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1935-1940.
Design of a Support and Foundation for a Large Lunar

Miller, ed., 1992), p1935-1940.
Design of a Support and Foundation for a Large Lunar
Optical Telescope, Koon Meng Chua, Stewart W. Johnson and R. Sahu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p1952-1963.
Developing Technologies for Lunar-Based Astronomy,
Stewart W. Johnson, Jack O. Burns, Koon Meng Chua
and John P. Wetzel, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992, p1853-1864.
Laboratory Evaluation of Footings for Lunar Telescopes,

Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chua, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1941-1951.

Low Frequency Astronomy from Lunar Orbit, John P. Basart and Jack O. Burns, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1913-1924.

The Lunar Transit Telescope (LTT): An Early Lunar-Based Science and Engineering Mission, John T. McGraw, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1865-1879.

Russell J. Millet, ed., 1992, p. 1605-1679.
Mitigation of Adverse Environmental Effects on Lunar-Bassed Astronomical Instruments, Charles L. Johnson, Kurtis L. Dietz, T. W. Armstrong and B. L. Colborn, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 1832-1841.

NASA's Future Plans for Space Astronomy and Astro-physics, Michael S. Kaplan, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1789-1797

Operations Analysis for a Large Lunar Telescope, Christopher Thyen, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1591-1602.

and Russell J. Miller, ed., 1992, p.1591-1002.
The Proposed NASA Lunar-Based Astronomical Observatories, Paul N. Swanson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p.1798-1808.
SALSA: A Lunar Submillimeter-Wavelength Array, M. J. Maboney and K. A. Marsh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p.1902-1912.
Structural Design of Lunar Bedio Telescope Ligin Inter-

Structural Design of Lunar Radio Telescope Using Inter-active CAD, Ferhat Akgul, Walter H. Gerstle and Stew-art W. Johnson, AS Jan. 92, p12-23.

Thermal Investigation of a Large Lunar Telescope, Sherry T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 842-1852.

Very Low Frequency Radio Astronomy from Lunar Orbit, Nebojas Duric, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1925-1934.

etric structures

Bridge Barges Into New York, CE May 92, p18-19.

Free Vibration Analysis of Asymmetric Buildings, Sean Wilkinson and David Thambiratnam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p461-465.

Asymptotic series

Asymptotic Importance Sampling, Marc A. Maes, Karl Breitung and Philippe Geyskens, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p96-99.

A. Mathematical Tool Set for SORM Reliability Methods, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p248-251.

Atmospheric diffusion
Air Emissions Testing of Air Toxics at WWTPs, Michael
J. Barboza, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p79-85.

Modelling the Effect of Atmospheric Emissions on
Groundwater Composition, Theresa J. Brown, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p2318-2322.

pheric pres

Atmospheric pressure
Field Measurements of Tracer Gas Transport Induced by
Barometric Pumping, R. H. Nilson, W. B. McKinnis,
P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F.
Smith, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p710-716.

Extended Split-Hopkinson Bar Analysis for Attenuating Materials, Conrad W. Felice, Edward S. Gaffney and Joseph A. Brown, EM May 91, p1119-1135.

Attorberg limits

Critical Reappraisal of Colloidal Activity of Clays, N. S. Pandian and T. S. Nagaraj, GT Feb. 90, p285-296.

Attitudes

The Monitoring of Water Conservation Behavior and Attitudes in Southern California, Duan D. Baumann, Eva Opitz and Diane Egly, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p117-134.

Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), pl 298-1302.

he Construction of New Victoria Dam, Australia, Robert J. Wark, Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p63-82.

The Durability of Rubble Mound Armour in Service—A Case Study, Terry Piggott, Sam Smith and Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed.,

ers, Orville T. Magoon, ed. and William F. Ballo, 1992), p254-267.
Ecological Sustainable Development—A Place in the Sun for Nuclear Energy? Carole Palmer, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1470-1477.

An Example of Rubble Mound Construction Procedures, A. W. Sam Smith and L. Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p138-

190. Regional Methods for Design Floods in Australia, David H. Pilgrim, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1-6.

Sydney Airport International Terminal Development, Barry R. Munce, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p258-271.

Water Program Upgrade Set for Down Under, CE Apr.

92, p21.
Wind Loads on Buildings with Sawtooth Roofs, Patrick J.
Saathoff and Theodore Stathopoulos, ST Feb. 92,
p429-446.

Automaton

AASHTO Bridge Design System—An Engineering Software with Formal Database Management, Roy A.
Imbsen and Toorak Zokaie, (Computing in Civil Engineering and Geographic Information Systems Symposium. Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p663-670.

Advanced Technology Applications in Chicago-Area Freeway Traffic Management Program, Joseph M. McDermott, TE May/June 92, p451-456.

Automated Construction Field-Data Management System, Bob G. McCullouch, TE July/Aug, 92, p517-526.

Automated Identification of Construction Equipment Using Acoustical Measurements, H. Randolph Thomas, Gary R. Smith and J. G. Orlowsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p492-499.

Automated Knowledge Acquisition of Preliminary Design Concepts, Mary Lou Maher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p375-382.

Automating The Corps, James Denning, CE Apr. 92, Automating The Corps, James Denning, CE Apr. 92,

Automating The Corps, James Denning, CE Apr. 92,

Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Dec. 92, p731-748.
Bagaage System Implementation at DIA, Louis S. Nelson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p235-238.
Case Studies of Semi-Ciosed Pipeline Systems for Flexible Deliveries, John L. Metriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p468-473.
Computer-Controlled Brick Masonry, Leonhard E. Bernold, Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-160.

Construction Applications of Vision Systems, Gary R. Smith, H. Randolph Thomas and William Gleba, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p476-483.
Construction Automation Work Classification, Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p500-505.
Design of Control Algorithm for Operation of Irrigation Canals, J. Mohan Reddy, Amadou Dia and Ahmed Oussou, IR Nov/Dec. 92, p852-867.
Development of Computer Automated Bridge Inspection Process, S. S. Kuo, Thomas E. Davidson and Leonard M. Fiji, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p94-861.
Engineering, Construction, and Operations in Space III, 2 vols., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, 0-87262-868-X, 2513pp.
Evapotranspiration Data Management in California, R. L. Snyder and W. O. Pruitt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-133.
Geographic Information Systems—Evolutionizing the Decision Making Process, Dennis H. Klein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p325-327.
Histogram Based Approach for Automated Pavement-Crack Sensing, K. R. Kirschke and S. A. Velinsky, TE Sent (Cet 29 r. 1707-102.

ed., 1992), 6325-527.

Histogram-Based Approach for Automated Pavement-Crack Sensing, K. R. Kirschke and S. A. Velinsky, TE Sept./Oct. 92, p700-710.

The Human Side of Systems, Harold E. (Smoke) Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1534-1541.

JKF Airport Cargo System Will Be U.S. First, CE May 92, p12-13.

Laptop Automated Navigation Aid Positioning System with Differential GPS, Charles F. Klingler, Michael R. Wroblewski and Scott Krammes, SU Nov. 92, p130-134.

The Last Freeway, Jack Hallin, CE May 92, p60-63.
Planning for Construction Automation by Integrating Information Flow with Software and Hardware Controls, formation Flow with Software and Hardware Controls, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p856-863. Results of a Monitoring Program of Moored Ship Re-sponse to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p591-

601.
601.
Robotics in SEI Terrestrial Launch Site Operations, Brian S. Yamamoto, A. J. Mauceri and O. A. Chaikovsky, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1464-1474.
Sequential Versus Distributed Constraint-Based Approach to Structural Design Automation: A Comparative Study, Sivand Lakmszaheri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p261-268.
Soft Touch People Mover Central Control. R. D. Milnes.

1992), p261-268.

Soft Touch People Mover Central Control, R. D. Mines, R. S. Fahringer and J. B. Bojarski, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p199-206.

Supervision and Automatic Control of Robotic Systems in Nuclear Eavironments, J. Benner and K. Leinemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p966-973.

Testing Pavement Image Processing Systems: An Engineering Approach, Matthew O. Ward, Tahar El-Korchi, Norman Wittels and Michael A. Gennert, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p41-62.

Testing Photoelectric Sensor System to Classify Vehicles, J. L. Gattis and Clyde E. Lee, TE May/June 92, p457-

Urban Transit Guides Application of Advanced Train Control, Sesto Vespa and Tom Parkinson, TE Jan./Feb. 92, p146-159.

92, p146-159. Use of Pitot Projects for Technology Transfer in Developing Countries, John L. Merriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p238-243.
Wave-Motion Stability in Canals with Automatic Controllers, Simion Hancu and Paul Dan, HY Dec. 92,

trollers, Sin

Port of Portland's Berth 601 Floating Dock, Elmer W. Ozolin and Walter R. Haynes, (Ports '92, David Tor-seth, ed., 1992), pi 50-163.

Testing Photoelectric Sensor System to Classify Vehicles, J. L. Gattis and Clyde E. Lee, TE May/June 92, p457-

Auto-regressive models
Stochastic Analysis of Seasonal Hydraulic Conductivity,
Ram Gupta, Ramesh Rudra, Trevor Dickinson,
Naveen Patni and Greg Wall, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p32-38.

Auto-regressive moving-average model
Modal and Wave Load Identification by ARMA Calibration, Jakob Laigaard Jensen, Poul Henning Kirkegaard
and Rune Brincker, EM June 92, p1268-1273.

Recursive Parameter Estimation for ARMA Simulations, Bingqi Miao, EM Dec. 92, p2484-2490.

AGC Presents 20th Annual Build America Awards, CE June 92, p12,14,16. Are You Ready for Spaghetti (Bridges, That Is)?, CE Sept.

92, p80.

ASCE's Deason is Federal Engineer of the Year for 1992, NE Apr. 92, p16. Call for Nominations for Bard Awards, CE Apr. 92, p10.

Calling All Living Legends, CE Jan. 92, p11.
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CE Prof. Discovers How to be Very, Very Popular, NE

CE Prof. Discovers from to be Val.,
Apr. 92, p4.
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Environmental Projects Garner Academy's Awards, CE

July 92, p27.

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Foundation Gives First Journalism Award, NE Jan. 92,

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Historic Bridge Program Gets Preservation Award, NE Aug. 92, p9

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National Endowment of the Arts Honors Engineering
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NRC Offers Research Awards, CE Feb. 92, p12.
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The OCEA Awards of Merit, Teresa Austin, CE July 92, p50-53.

OCEA Winning Bridge Takes More Top Engineering Awards, NE Sept. 92, p15.

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Seattle Swings Again, Rita Robison, CE July 92, p46-49.
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Time to Nominate Projects for 1993 OCEA Competition, CE Aug. 92, p66.

Behavior of Concrete Hollow-Block Masonry Prisms under Axial Compression, T. P. Ganesan and K. Ramamurthy, ST July 92, p1751-1769.

Buckling of Pressurized Axisymmetrically Imperfect Cyl-inders Under Axial Loads, Jin-Guang Teng and J. Mi-chael Rotter, EM Feb. 92, p229-247.

Axial loads

Axial and Free-Bending Analysis of Spiral Strands Made

Simple, Mohammed Raoof and Yu Ping Huang, EM

Dec. 92, p2335-2351.

Concrete Box Sections Under Biaxial Bending and Axial Load, Cengiz Dundar, ST Mar. 90, p860-865.

Design Aids for Reinforced Concrete Columns, Bao-Jun

Sun and Zhi-Tao Lu, ST Nov. 92, p2986-2995.

Design of Piles in Permafrost Under Combined Lateral and Axial Load, A. Foriero and B. Ladanyi, CR Sept. and Axia: 91, p89-105.

Design of RC Sections with Generic Shape under Biaxial Bending, Andrea Dall'Asta and Luigino Dezi, ST Apr. 92, p1138-1143.

Benging, Andrea Dall'Asta and Luigino Dezi, ST Apr. 92, p1138-1143.

Bastic Stability of Heavy Rotating Columns, C. M. Wang, EM Jan, 90, p234-239.

Investigation of the Behavior of Reinforced Plastic Columns with Concrete Core, Saeed Daniali, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p666-676.

Review of API Guidelines for Pipe Piles in Sand, Magued Iskander and R. E. Olson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p798-812.

Simple Cord Composities, Anthony J. Paris, Ching-Chang Lin and George A. Costello, EM Sept. 92, p1939-1948.

Skin Friction Distributions on Piles in Sand, Nazzul I. Khan, John S. Templeton, III. and Michael W. O'Neill, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p783-797.

Stiffness Expressions for Element with Central and End Springs, R. E. McConnel and A. I. El-Sheikh, ST Apr. 92, p955-969.

Thermomechanical Buckling of Multilavered Composite Plates.

Thermomechanical Buckling of Multilayered Composite Plates, Ahmed K. Noor and Jeanne M. Peters, EM Feb. 92, p351-366.

Axisymmet

Axisymmetric General Shells and Jointed Shells of Revo-lution, Pei Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

p3186-3202. Evaluation of Plane Strain versus Axisymmetry, Dunja Perić, Kenneth Runesson and Stein Sture, EM Mar. 92, p512-524. Exact Formulation of Axisymmetric-Interface-Element Stiffness Matrix, Zebong Yuan and Koon Meng Chua, GT Aug. 92, p1264-1271. Pressure of Crushed Ice as Mohr-Coulomb Material Against Flat, Axisymmetric Indentor, Dat Duthinh, CR Dec. 92, p139-151. Time Domain Analysis of Dynamically Loaded Single.

Time Domain Analysis of Dynamically Loaded Single Piles, S. M. Mamoon and P. K. Banerjee, EM Jan. 92, p140-160.

p140-100.

Backfill-Stiffened Foundation Wall Construction, Robert Nicholls, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p286-295.

Backfill-Stiffened Foundation Wall Design, Robert Nicholls, GT Nov. 92, p1822-1836.

Damage of Entryway Stairs due to Settlement of Gravel Backfill, Robert W. Day, CF May 92, p121-124.

Effect of Water on the Consolidation of Crushed Rock Salt, M. L. Wang, S. K. Miao, A. K. Maji and C. L. Hwang, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p531-534.

Evaluation of Flowable Fly-Ash Backfill. I: Static Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463.

Evaluation of Flowable Fly-Ash Backfill. II: Dynamic Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463.

Evaluation of Flowable Fly-Ash Backfill. Michanam Grank Burns, GT Mar. 92, p449-474.

Factors Influencing Passive Pullout Resistance, Joon-Ik Sohn, Soo-Il Kim, Young-Jin Kim and Dong-Deok Yoon, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1153-1162.

Mix Design for Flowable Fly-Ash Backfill Material, R. Janardhanam, F. Burns and R. D. Peindl, MT Aug. 92, p252-263.

p252-263. Pullout Tes

p. 252-253. Allout Tests Using Steel Grid Reinforcements with Low-Quality Backfill, Dennes T. Bergado, Kam-Hung Lo, Jin-Chun Chai, Ramaiah Shivashankar, Marolo C. Alfaro and Loren R. Anderson, GT July 92, p1047-

Retaining Wall With Reinforced Cohesionless Backfill, Swami Saran, K. G. Garg and R. K. Bhandar, GT Dec. 92, p1869-1888.

Technique for Using Fine-Grained Soil in Reinforced Earth, A. Sridharan, B. R. Srinivasa Murthy, Bin-dumadhava and K. Revanasiddappa, GT Aug. 91, p1174-1190.

Backwashin

Calculating Flow in Manifold and Orifice System, Fazal H. Chaudhry and Luisa F. R. Reis, EE July/Aug. 92,

Velocity Gradient in Filter Backwashing, Mustafa Turan, EE Sept./Oct. 92, p776-790.

SCS Water Surface Profile Model—WSP2, William H. Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p859-864.

Bhowmik, ed., 1992), p859-864.

Backwater profiles

Backwater profiles

HEC-2 Water Surface Profiles Program, Vernon Bonner,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p866-871.

Hydraulic and Geomorphic Classification of the Upper
Mississippi River System: Pilot Study of Three Pools,
Nani G. Bhowmik and Renjie Xia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p666-671.

Stability Problems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p846-851.

Bacteria

Bacteria
Biochemical Control of Sulfide Production in Wastewater
Collection Systems, Ricardo B. Jacquez and Hamdy H.
El-Rayes, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p327-333.
Bugs Vacuum Dirty Soil, CE Nov. 92, p87.
Characterization of a Heavy Metal Contaminated Site,
M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty,
I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p463-467.
Effluent Nitrite Accumulation in the Heterotrophic Deni-

Solutions, F. Pierce Linaweaver, ed., 1992), p463-467. Effluent Nitrite Accumulation in the Heterotrophic Deni-trification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375. Evaluation of Ozone Disinfection Systems: Characteristic Time T, O. Lev and S. Regli, EE Mar/Apr. 92, p268-285.

Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.

p47)-494. Extraction of Potable Water from Urine for Space Applications, Peter J. Holland, Donald M. Bird and Carolyn L. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-1689.

Russell J. Miller, ed., 1992), p1680-1689.
Improved Performance of Activated Sludge with Addition of Inorganic Solids, Robert B. Bowen and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p474-479.
Microbiologically Induced Corrosion, P. J. B. Scott and Michael Davies, CE May 92, p58-59.

Microorganism Survival in Ice-Covered Marine Environ-ment, S. J. Stanley, D. W. Smith and G. D. Milne, CR June 92, p58-72.

QSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, N. H. Tang, D. J. W. Blum, R. E. Speece and N. Nirmalakhandan, EE Jan./Feb. 92, p17-37.

Baffles

The Control of Large Amplitude Liquid Sloshing with Moving Baffles, T. C. Su and Y. X. Wang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p208-211.

Breakwater, Jonathan W. Lott and Walter E. Hurti-enne, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), 9487-502.

Bangladesh Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

tions, Marshail Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

Bank Erosion Study of the Nile River at Bani Mazar, A. F. Ahmed and M. M. Gasser, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1923, p816-821.

Erosion of Steep River Banks and Time Evolution Towards Equilibrium Channel Shape, Agones Kovacs and Gary Parker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1921), p896-899.

Evaluation of Palmiter Erosion Remediation Techniques—A Cas Study, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p660-665.

Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersaturation, Perry L. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p311-316.

Recent Criteria for Design of Groins, Cassie C. Klumpp and Dewer C. Basin (Lydraulic Engineering: Suring of Parker C. Raint (Lydraulic Engineering: Suring of Parker C. Parker (Lydraulic Engineering)

p511-319.

Recent Criteria for Design of Groins, Cassie C. Klumpp and Drew C. Baird, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p828-

Sediment Management with Submerged Vanes. II: Appli-cations, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

Study of Groins on the Middle Rio Grande, Drew C. Baird and Cassie C. Klumpp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p822-827.

ank stabilization

Bank Stabilization
Bank Erosion Study of the Nile River at Bani Mazar, A.
F. Ahmed and M. M. Gasser, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p816-821.

1992), p816-821.

Evaluation of Palmiter Erosion Remediation Techniques—A Case Study, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p660-665.

Hydraulic Geometry of Threshold Channels, Panayiotis Diplas and Gregorio Vigilar, Hy Apr. 92, p597-614.

Predicting Influence of Bank Vegetation on Channel Capacity, Richard Masterman and Colin R. Thorne, HY July 92, p1052-1058.

July 92, p1052-1038.
Recent Criteria for Design of Groins, Cassie C. Klumpp and Drew C. Baird, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p828-

833.
Riprap Design in Marine Terminals, Sandra K. Martin and Stephen T. Maynord, (Ports '92, David Torseth, ed., 1992), p364-375.
Study of Groins on the Middle Rio Grande, Drew C. Baird and Cassie C. Klumpp, (Hydraulie Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p822-827.

Bankruptcy
Design Engineer/Contractor Bankruptcy: Considerations for Debtor and Creditors, Jeffrey S. Russell and James J. Casey, Jr., ME July 92, p278-297.
Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.

Barges
Characteristics of Waves and Drawdown Generated by
Barge Traffic on the Upper Mississippi River System,
Ta Wei Soong and Nani G. Bhowmik, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p672-676.
Minimizing the Risk and Impact of Tanker Accidents, C.
S. Birt and A. J. Jordan, (Ports '92, David Torseth, ed.,
1992), p670-681.

Positive Drift of a Backward-Bent Duct Barge, Michael E. McCormick and William E. Sheehan, WW Jan./Feb. 92, p106-111.

Return Flows in Large Rivers Associated with Navigation Traffic, Nani G. Bhowmik, B. S. Mazumder and Ta Wei Soong, (Hydraulic Engineering: Saving a Threamend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p760-765.

ndiment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p677-

Hampton, New Hampshire: Beach Nourishment Project, Franklin W. Fessenden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p60-72.

Coastal Geomorphology and Sand Budgets Applied to Beach Nourishment, Timothy W. Kana and F. David Stevens, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p29-44.

Investigation of Coastal Conditions at Oregon Inlet, NC for the Replacement of the Herbert C. Bonner Bridge, Jeffrey G. Shelden, John R. Lesnik and M. Anthony Young, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p537-553.

Simple Conceptual Explanation of Down-Drift Offset In-lets, Scott L. Douglass, WW Mar./Apr. 91, pl 36-142.

Design of a Mechanical Refuse Barrier, Edward J. Schmeltz, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p680-696.

Design of Wave Barriers for Reduction of Horizontal Ground Vibration, Tahmeed M. Al-Hussaini and Shahid Ahmad, GT Apr. 91, p616-636.

Flexible Membrane Wave Barrier, Gary O. Thompson, Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p129-148.

KODET 1. HUGSPEIN, ed., 1992), p129-148.
Mitigation of Acidic Mine Drainage: Engineered Soil Barriers for Reactive Tailings, Abdel-Mohsen O. Mohamed, Raymond N. Yong and Boon K. Tan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462.

Noise Barrier Simulated by Rigid Screen with Back Wall, L. H. Huang and T. M. Kung, EM Jan. 92, p40-55. Ph.D. Roadblocks for Experienced Engineers, Bruce E. Marsh, El Jan. 90, p56-60.

Analytical Modeling of Bonded Bars under Cyclic Loads, Parviz Soroushian, Kienuwa Obasaki and Shashidhara Marikunte, ST Jan. 91, p48-60.

Considerations in Using Bragg Reflection for Storm Ero-sion Protection, James A. Bailard, Jack W. DeVries and James T. Kirby, WW Jan./Feb. 92, p62-74.

Corrosion Cracking in Relation to Bar Diameter, Cover, and Concrete Quality, Rasheeduzzafar, S. S. Al-Saadoun and A. S. Al-Gahtani, MT Nov. 92, p327-342.

Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, Ali M. Hamza and Antoine E. Naaman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p996-999.

Necking of Creep-Cavitating Bars, C. H. Lu and A. J. Levy, EM Apr. 92, p746-762.

Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p292-295.

Analysis of Two Lunar Oxygen Production Processes, Laura Hernandez and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p576-585.

Computer-Aided Characterization of Wellfield-Testing Results in Basalts, J. A. Paschis, J. R. Kunkel and T. D. Steele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p475-480.

Geochemical Evidence for Waning Magmatism and Polycyclic Volcanism at Crater Flat, Nevada, Frank V. Perry and Bruce M. Crowe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2356-2365. Indigenous Resource Utilization in Design of Advanced Lunar Facility, Larry S. Bell, Michael G. Fahey, Todd K. Wise and Paul C. Spana, AS Apr. 92, p230-247. Longevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, Bruce D. Marsh and Ronald G. Resmini, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2025-2032. Simple and Efficient Methods to Produce Construction Materials for Lunar and Mars Bases, Voji Ishikawa, Tetsuo Sasaki and Tetsumi Higasayama, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1335-1346.

1992), p1335-1346. Sintering of Lunar Glass and Basalt, Carlton C. Allen, Joy A. Hines, David S. McKay and Richard V. Morris, (En-gineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-1218.
Temporal and Spatial Distribution of Basaltic Volcanism in the Pancake and Reveille Ranges North of Yucca Mountain, K. A. Foland and S. C. Bergman, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2366-2371. 1992), p2366-2371.

Base now 7-Day 10-Yr Low Flow Relationships for Ungauged Sites in Central Italy, Piergiorgio Manciola and Stefano Casadei, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p250-256.

AASHTO Seismic Isolation Design Requirements for Highway Bridges, Ronald L. Mayes, Ian G. Buckle, Trevor E. Kelly and Lindsay R. Jones, ST Jan. 92,

analytical Studies on the Seismic Response of Lead Rubber Base Isolated Bridges, Emmanuel Maragakis, Mehdis Saiidi and Eui-Seng Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p67-70.

Aseismic Hybrid Control of Nonlinear and Hysteretic Structures I, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1423-1440.

Aseismic Hybrid Control of Nonlinear and Hysteretic Structures II, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1441-1456.

Dynamic Interface Shear Strength Properties of Geomembranes and Geotextiles, M. K. Yegian and A. M. Lahlaf, GT May 92, p760-779.

Experimental Study of Secondary Systems in Base-Isolated Structure, G. Juhn, G. D. Manolis, M. C. Constantinou and A. M. Reinhorn, ST Aug. 92, p2204-2221.

Experimental Study of Sliding Isolated Structures with Uplift Restraint, Satish Nagarajaiah, Andrei M. Reinhorn and Michalakis C. Constantinou, ST June 92, p1666-1682.

Interactive Base-Isolation Foundation System: 1. Finite Element Formulation, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2048-2058.

Interactive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.

Seismic Performance of Fixed-Base and Base-Isolated Steel Frames, A. N. Lin and H. W. Shenton, III., EM May 92, p921-941.

Wind Effects on Base-Isolated Structures, Yu Chen and Goodarz Ahmadi, EM Aug. 92, p1708-1727.

Base plates
Ductile Multiple-Anchor Steel-to-Concrete Connections,
Ronald A. Cook and Richard E. Klingner, ST June 92,
p1645-1665.

Basements, building
When Sewer Rehab Doesn't Stop Basement Flooding,
Thomas Rowlett and Kenneth Kelgard, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p648-653.

Bealms
Feedback Control of Basin-Irrigation System, A. J. Clemmens, IR May/June 92, p480-496.
HGL Elevation at Pipe Exit of USBR Type VI Impact Basin, Charles E. Rice and Kem C. Kadavy, HY July 91, p929-933.
The Physiography and Engineering Constraints of the Continental Slope in the Northwestern Gulf of Mexico, William R. Bryant and Gregory R. Simmons, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1036-1050.
Regional Flow-Duration Curves for Ungauged Sites in Massachusetts, Neil Fennessey and Richard M. Vogel, WR July/Aug. 90, p530-549.

atch processing dechanism of Biological Treatment in Plug-Flow or Batch Systems, Hasan Ali San, EE July/Aug. 92, p614-

628.

Bathymetry

Modeling the Salinity "History" of Great Egg Harbor
Bay, New Jersey, Bryan Pearce, Howard McIlvaine, Ed
Simek, Pete Sucsy and Vibbu Vivek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p959-964.

Oceanographic Influences on Oil Spill Movement in the
Arabian Gulf, S. Venkatesh and T. S. Murty, (Hydraulic Engineering: Saving a Threatened Resource—In
Search of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p108-113.

The Physiography and Engineering Constraints of the
Continental Stope in the Northwestern Gulf of Mexico,
William R. Bryant and Gregory R. Simmons, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed.,
1992), p1036-1050.

Scour Hole Development and Stabilization at Shinnecock
and Moriches Inlets, New York, Yen-hsi Chu and Gilbert K. Nersesian, (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), p571-582.

Battes

Batten
Bond Strength in Battened Composite Columns, Yasser
M. Hunaiti, ST Mar. 91, p699-714.

Batter Piles and the Seismic Performance of Pile-Supported Wharves, W. H. Roth, H. Fong and C. de Rubertis, (*Ports '92*, David Torseth, ed., 1992), p336-

349.
Styles Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Gerald M. Serventi and Larry L. Scheibel, (Ports '92, David Torseth, ed., 1992), p429-442.
Proposed Seismic Design Method for Piers and Wharves, Robert E. Harn and Bankim C. Mallick, (Ports '92, David Torseth, ed., 1992), p403-417.

ayes Theorem sssion Summary—Plenary Session, Overview of Risk Assessment and Management, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p338-342.

Rniv, ed., 1992), p338-342.

Bayesian analysis
An Approach for Incorporating Inflows Uncertainty in Management Models, Luis Vives, Jesús Carrera and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p84-89.

Bayesian L. France, 1992, p84-89.

p84-89.

Bayesian Inference for Feedback Control. I: Theory, A. J. Clemmens and J. B. Keats, IR May/June 92, p397-415.

Bayesian Inference for Feedback Control. II: Surface Irrigation Example, A. J. Clemmens and J. B. Keats, IR May/June 92, p416-432.

A Bayesian Reliability Approach to the Performance Assessment of a Geological Waste Repository, John A. Flucck and Ashok K. Singh, (High Level Radioactive Waste Management Program Committee, 1992), p1625-1632.

Bayesian Reliability Updating of Existing Steel Girder Bridges, Sami W. Tabsh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p55-58.

1992), p55-58.

1992), p35-36. A Criticism of Statistical Methods in Probabilistic Models in Structural Reliability, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability). ity, Y. K. Lin, ed., 1992), p236-239

An Event Size Probability Distribution for Risk Analysis, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p232-237.

Geotechnical Database Manipulation to Effect Stochastic Analysis, James M. Keane, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p224-227.

Statistical Decision Analysis for Interception Wells, Hewa A. Wijedasa and Marian W. Kemblowski, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p116-121.

Bays

Effects of Sea-Level Rise on Bays and Estuaries, ASCE

Task Committee on Sea-Level Rise and Its Effects on

Bays and Estuaries, HY Jan. 92, pl-10.

Effects of Wind on Circulation in Los Angeles-Long

Beach Harbors, William C. Seabergh and S. Rao Venu
lakonda, (Estuarine and Coastal Modeling, Malcolm L.

Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed.,

Ralph Cheng, ed. and Craig Swanson, ed., 1992),

151-162.

Raiph Cheng, ed. and Craig Swanson, ed., 1992), p551-563. 
Experiments with a Terrain-Following Hydrodynamic Model for Cobscook Bay in the Gulf of Maine, David A. Brooks and Laurice U. Churchill, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p215-226.

The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, Boris Galperin, Alan F. Blumberg and Robert H. Weisberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p332-343. 
Methodology for Validation of a Tampa Bay Circulation Model, Kurt Hess and Kathryn Bosley, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p33-34. 
Modeling the Salinity "History" of Great Egg Harbor Bay, New Jersey, Bryan Pearce, Howard McIlvaine, Ed Simek, Pete Sucay and Vibhu Vivek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p359-964. 
Modeling Tidal and Wind Driven Circulation in Sarasota

Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p357-369.

ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p357-369.

Numerical Simulation of Tidal Flow in Shallow Water Bay by Finite Difference Method, Xiaoyong Zhan, (Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p884-693.

Preliminary Circulation Simulations in Apalachicola Bay, T. S. Wu and W. K. Jones, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p344-356.

A Study of Salt Transport Processes in Delaware Bay, Roy A. Walters, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p240-251.

Thirty Year Simulation of Chesapeake Bay Eutrophication, Carl F. Cerco and Thomas M. Cole, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p116-126.

Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.

Balant, Zdeněk P.

Bahant, Zdenbk P. For CE Researcher, Return to Roots Hold Special Signifi-cance, NE Mar. 92, p5.

Application of a Beach Plan Evolution Model in Sergipe, Brazil, Otavio J. Sayao and K. C. Ander Chow, (Coast-al Engineering Practice '92, Steven A. Hughes, ed., 1992), p234-250.

Articulating Block Mat Revetment for Whaler's Village, Robert A. Nathan and David G. Cannon, (Coastal En-gineering Practice '92, Steven A. Hughes, ed., 1992), p268-284.

p268-284.

Bay Ridge, Anne Arundel County, Maryland Offshore Breakwater and Beach Fill Design, Edward T. Fulford and Kenneth M. Usab, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p203-220.

Chesapeake Bay Field Modeling and Monitoring Projects, Wesley E. Coleman, Jr., (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p221-233.

Considerations in Using Bragg Reflection for Storm Eroston Protection, James A. Ballard, Jack W. DeVries and James T. Kirby, WW Jan/Feb. 92, p62-74.

Corns to Restore Jersey Shore. CE Dec. 92, p10, 13.

Corps to Restore Jersey Shore, CE Dec. 92, plo.13.

Damage Doesn't Reach the Beach, CE Dec. 92, pl. 13.

Design of Protective Dunes at Dam Neck, Virginia, John R. Headland, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p251-267.

Gravel Equilibrium Beach Design for Arresting Shore Erosion at Flathead Lake, Montana, Steven L. Da Costa, Joseph L. Scott and David P. Simpson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), Engineerii pl 54-169.

p154-169.

Hampton, New Hampshire: Beach Nourishment Project, Franklin W. Fessenden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p60-72.

Hydrodynamic Forces and Evolution of a Nearshore Berm at South Padre Island, Texas, James A. Aidala, Neil T. McLellan and Cheryl E. Barke, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239.

Investigation of Coastal Conditions at Oregon Inlet. NC

Investigation of Coastal Conditions at Oregon Inlet, NC for the Replacement of the Herbert C. Bonner Bridge, Jeffrey G. Shelden, John R. Lesnik and M. Anthony Young, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p537-553.

Trugnes, etc., 19721, p.31-323.
The Landfall of Hurricane Hugo, Billy L. Edge, Ben L. Sill and Orville T. Magoon, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p988-993.

Mitigation of Harbor Caused Shore Erosion with Beach Nourishment Delayed Mitigation, St. Joseph Harbor, MI, Charles N. Johnson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), pl 37-153.

92. Steven A. Hughes, ed., 1992), p137-153.
Monitoring of the 1988 Boca Raton Beach Nourishment Project, Richard H. Spadoni, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p120-136.
Numerical Beach Profile Modelling for Beachfull Projects, Robert B. Nairn and Keith J. Riddell, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p12-28.

Observation of the Post-Construction Performance of a System of Groins along an Eroding Beach, C. I. Mout-zouris, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-319.

An Overview of Segmented Offshore/Headland Breakwa-ter Projects Constructed by the Buffalo District, Thom-as Bender, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.170-188.

Bay Ridge, Anne Arundel County, Maryland Offshore Breakwater and Beach Fill Design, Edward T. Fulford and Kenneth M. Usab, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p205-220.

92, Seven A. Hughes, ed., 1972, p.203-220.

Beach Nourishment with Aragonite and Tuned Structures, Kevin R. Bodge, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, p.73-89.

Beach-Nourishment Performance Predictions, R. G. Dean and Chul-Hee Yoo, WW Nov./Dec. 92, p.567-594.

Coastal Geomorphology and Sand Budgets Applied to Beach Nourishment, Timothy W. Kana and F. David Stevens. (Coastal Engineering Practice '92, Steven A. Hughet, cd., 1992), p29-44.

Coastal Processes and Engineering on a Micronesian Fringing Reef, Stanley J. Boc, Jr., William J. Reynold and Jasmina M. Dobinchick, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p285-302.

Corps to Restore Jersey Shore, CE Dec. 92, p10,13.
Estimating Extreme Values of Run-Up on Beaches, Scott
L. Douglass, WW Mar/Apr. 92, p220-224.

Experience with Beach Fill Equilibration and Recommended Design Guidelines, Erik J. Olsen, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p45-59.

pa3-39. Gravel Equilibrium Beach Design for Arresting Shore Erosion at Flathead Lake, Montana, Steven L. Da Costa, Joseph L. Scott and David P. Simpson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),

p154-169.

Hampton, New Hampshire: Beach Nourishment Project, Franklin W. Fessenden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p66-72.

Mitigation of Harbor Caused Shore Erosion with Beach Nourishment Delayed Mitigation, St. Joseph Harbor, MI, Charles N. Johnson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p137-153.

Mobile-Bed Physical Model Tests for the 1992 Olympic Harbour, L. Moreno, C. Tamayo and J. Losada, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p840-849.

13721, p840-849.

Monitoring of the 1988 Boca Raton Beach Nourishment Project, Richard H. Spadoni, (Castal Engineering Practice '92, Steven A. Hughes, ed., 1992), p120-136. Numerical Beach Profile Modelling for Beachfill Projects, Robert B. Nairm and Keith J. Riddell, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p12-28.

pl12-28.

Short Beach Nourishment Fill Performance on an Irregular Coatline, Douglas W. Mann, Lamont W. Curtis and Thomas H. Daniel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), pl04-119.

Tackling Trapped Sediments, Scott A. Jenkins, Joseph Wasyl and David W. Skelly, CE Feb. 92, p61-63.

Design of a Mechanical Refuse Barrier, Edward J. Schmeltz, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p680-696.

An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536.

Fractice V., Steven A. Hughes, ed., 1992), p520-536.
Estimating Extreme Values of Run-Up on Beaches, Scott L. Douglass, WW Mar/Apr. 92, p220-224.
Field Monitoring of a Modular Detached Breakwater System, Robert M. Sorensen and J. Richard Weggel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p189-204.

Irregular Wave Setup and Run-up on Beaches, Nobuhisa Kobayashi and Andojo Wurjanto, WW July/Aug. 92,

aboratory Investigation of Beach Profiles in Tailings Disposal, Xiaosheng Fan and Jacob Masliyah, HY Nov. 90, p1357-1373.

Measured Internal Kinematics for Shoaling Waves with Theoretical Comparisons, M. W. Griffiths, W. J. Eas-son and C. A. Greated, WW May/June 92, p280-299.

Model for Transport of Floating Debris in the Ocean, Y. C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.

Prediction of Storm/Normal Beach Profiles, Robert A. Dalrymple, WW Mar./Apr. 92, p193-200.

Lauympic, www.mar/Apr. 92, p193-200.

Robust Approach to Wave Runup Calculation, Todd L. Walton, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p879-891.

Sea Defence System at Herne Bay, England, J. H. de Vroeg, J. van Overeem, A. G. Roberts and M. R. Beck, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p90-103.

Approaches, James T. Kirby, James M. Kaihatu and Hajime Mase, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p71-74.

Shoaling and Decay of Two Wave Trains on Beach, Jane McKee Smith and Charles L. Vincent, WW Sept./Oct. 92, p517-533.

Shoreline Profile of Stokes-Mode Edge Waves, Harry H. Yeh, WW Jan./Feb. 92, p112-116.

The Talbert Channel Ocean Outlet Project, Craig B. Leidersdorf, Kenneth E. Smith and Ruh-Ming Li, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p745-761.

Beam columns
Buckling Analysis of Structures Composed of Tapered
Members, Siu Lai Chan, ST July 90, p1893-1906.
Confinement Steel Requirements for Connections in
Ductile Frames, M. R. Ehsani and J. K. Wight, ST
Mar. 90, p751-767.

Mar. 90, p751-767.

Cyclic Behavior of End-Plate Moment Connections, Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2917-2930.

Cyclic Behavior of Extended End-Plate Joints, Ahmed Ghobarah, Robert M. Korol and Ashraf Osman, ST May 92, p1333-1353.

Force Deformation Equations for Initially Curved Later-ally Loaded Beam Columns, R. E. McConnel, EM July 92, p1287-1302

Geometric and Material Nonlinear Analysis of Thin-Walled Beam-Columns, J. L. Meek and W. J. Lin, ST June 90, p1473-1490.

Inelastic Amplification Factor for Design of Steel Beam-Columns, I. S. Sohal and N. A. Syed, ST July 92. Columns, I. p1822-1839.

Modeling Slab Contribution in Frame Connections, B. M. Shahrooz, S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494.

Prebucking Deflections and Lateral Buckling. I: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Applications, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2967-2985.

p.2707-2783.

Issue Shavior and Shear Strength of Framed Joint Using Steel-Fiber Reinforced Concrete, Jiuru Tang. Chaobin Hu, Kaijian Yang and Yongcheng Yan, ST Feb. 92, p341-358.

Seismic Panel Zone Design Effect on Elastic Story Drift in Steei Frames, Keh-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

Stiffness Expressions for Element with Central and End Springs, R. E. McConnel and A. I. El-Sheikh, ST Apr. 92, p955-969.

Analysis of Buildings Using Strain-Based Element with Rotational DOFs, A. K. H. Kwan, ST May 92, p1191-

ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1056-1070.

Apr. 92, p1036-1070.

Backfill-Stiffened Foundation Wall Design, Robert Nicholls, GT Nov. 92, p1822-1836.

Beam Strength Enhancement at Design Ductility Factor Demands, Gaetano Russo, ST Dec. 90, p3402-3416.

Beam-Column Behavior of Fabricated Steel Tubular Members, H. G. L. Prion and P. C. Birkemoe, ST May 92, p1213-1232.

92, p1213-1232.

Behavior of Concrete-Graphite/Epoxy Sections in Composite Bridge Girders, F. Gordaninejad, M. Saiidi and N. Wehbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709.

Bending of Rectangular Cross-Section Cantilever with Cylindrical Cutouts, A. K. Naghdi, EM Apr. 92, p831-842.

Computer Graphics in Detailing Strut-Tie Models, Abdulsalam Alshegeir and Julio Ramirez, CP Apr. 92, p220-232.

Deflections of Beams with Varying Rectangular Cross Section, Filippo Romano and Gaetano Zingone, EM Oct. 92, p2128-2134.

Oct. 92, p2128-2134.
Deformational Behavior of Fiber-Reinforced Concrete
Beams in Bending, H. V. Dwarakanath and T. S.
Nagaraj, ST Oct. 92, p2691-2698.
Design of Notched Wood Beams, Greg C. Foliente and
Thomas E. McLain, ST Sept. 92, p2407-2420.
Dynamic Response of an Infinite Beam Supported by a
Fluid, Z. G. Zhao and J. P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,
ed., 1992), p341-344.
Eigenproperties of a Twisted Nonuniform Becation.

Eigenproperties of a Twisted, Nonuniform Rotating Beam by the Finite Element Method, Alan G. Hernried and Wei-Ming Bian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p924-

Energy Equation for Beam Lateral Buckling, Yong Lin Pi, N. S. Trahair and S. Rajasekaran, ST June 92, p1462-1479.

Estimating Uplift Capacity of Light Steel Roof System, R. A. LaBoube, ST Mar. 92, p848-852. Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultruded Fiber-Reinforced Plastics Beams in Industrial Building Construction, Ethan A. Love and Tanongsak Bisarnsin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584.

Flexural Analysis of Reinforced Concrete Beams Containing Steel Fibers, Byung Hwan Oh, ST Oct. 92, p2821-2836.

Flexural and Shear Studies of Carbon Fiber Reinforced Beams, Paul Zia, Shuaib H. Ahmad, Rakesh K. Garg and Kristina Hanes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p984

987.
Formulas for Shear-Lag Effect of T-, and I-, and Box Beams, Qi-gen Song and Alexander C. Scordelis, ST May 90, p.1306-1318.
Fracture Mechanics and Size Effect of Concrete in Tension, Tianxi Tang, Surendra P. Shah and Chengsheng Ouyang, ST Nov. 92, p.3169-3185.
Frame Buckling Analysis with Full Consideration of Joint Compatibilities, Yeong-Bin Yang and Shyh-Rong Kuo, EM May 92, p.871-889.

EM May 92, p8 1-889.

The Generalized Brazier Problem for Orthotropic Straight Tubes of Finite Length, C. W. Bert and A. Libai, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p872-875.

High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheinman, EM May 92, p1026-1043.

Vilnay and I. Sheinman, EM May 92, p1026-1043. Hybrid (FRP-8teel) Reinforcement for Concrete Struc-tures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materialis: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p655-665. Model for Optimal Design of Reinforced Concrete Beam, B. K. Chakrabarty, ST Nov. 92, p3238-3242. Modeling Horizontally Nail-Laminated Beams, David R. Bohnhoff, ST May 92, p1393-1406. Modified Vlasov Model for Beams on Elastic Founda-tions, C. V. Girija Vallabhan and Y. C. Das, GT June 91, p956-966.

Premature Failure of Externally Plated Reinforced Con-crete Beams, Deric John Oehlers and John Paul Moran, ST Apr. 90, p978-995.

S1 Apr. 90, pp 3-993.
Prestressed Composite Girders. I: Experimental Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2743-2762.
Prestressed Composite Girders. II: Analytical Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2763-2783.

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92, p10.

92, p10.

Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanas, ST Apr. 90, p1061-1079.

Sensitivity Analysis of Thin-Walled I-Beams Resting on Elastic Foundation, B. B. Budkowska and C. Szymczak, EM June 92, p1239-1248.

Service Load Behavior of Concrete Members Prestressed with Unbonded Tendons, M. H. Harajli and M. Y. Kanj, ST Sept. 92, p2569-2589.

Shear-Stress Distribution in Symmetrically Tapered Can-tilever Beam, Edwin P. Russo and Gregory Garic, ST Nov. 92, p3243-3249.

Solid Modeling of RC Beams: 1. Data Structures and Algorithms, M. A. Austin and J. L. Preston, CP Oct. 92, p389-403.

Solid Modeling of RC Beams: 2. Computational Environ-ment, J. L. Preston and M. A. Austin, CP Oct. 92, p404-416.

patial Variability Effects on the Seismic Response of Models of Bridges, Aspasia Zerva, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p172-175.

Stability of Beams in Eccentrically Braced Frames, M. D. Engelhardt, K. C. Tsai and E. P. Popov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1043-1046.

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Stochastic Mixed Finite Difference Method, P. D. Spanos and B. A. Zeldin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p804-807

807.
Stress Wave Interaction in Finite Beam on Elastic Foundation, M. C. Wang and C. S. Little, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p580-583.
Stremmarket Roof Collapse in Burnaby, British Columbia, Canada, C. Peter Jones and N. D. Nathan, CF Aug.

90, p142-160.

90, p142-160.
Theoretical Study of Crack-Induced Eigenfrequency Changes on Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM Feb. 92, p384-396. Pimoshenko Beam Element Resting on Two-Parameter Elastic Foundation, L. M. Shirima and M. W. Giger, EM Feb. 92, p280-295. Uplift Capacity of Z-Purlins, Roger A. LaBoube, ST Apr. 91, p1159-1166.
Vibration Control of Beams by Beam-Type Dynamic Vibration Control of Stavus Imada, Susumu Toda, Norio Ogawa and Yasuo Imada, EM Feb. 92, p248-258.
Vibration Control of Beams with Embedded Smart Com-

278.
Vibration Control of Beams with Embedded Smart Composite Material, M. Arockiasamy, P. S. Neelakanta and G. Sreenivasan, AS Oct. 92, p492-498.
Vibration of Beams and Trashracks in Parallel and Inclined Flows, Thang D. Nguyen and Eduard Naudascher, HY Aug. 91, p1056-1076.

er, HY Aug. 91, p.1056-1076.

Beams, structural
Dynamic Response of Beams on Elastic Foundation, Yew
Chin Lai, Bing Yuan Ting, Woon-Sung Lee and Bryan
R. Becker, ST Mar. 92, p.853-858.
Interaction Effects in the Hybrid Control of EulerBernoulli Beams, S. T. Pang. T. -C. Tsao and L. A.
Bergman, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992, p.820-823.
Random Response of Multicrystalline Structures,
Dariush Mirfendereski and Armen Der Kiureghian,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p.800-830.
Vibration of a Bridge Under a Random Train of Moving,
Loads, M. Di Paola and G. Ricciardi, (Probabilistic,
Mechanics and Structural and Geotechnical Reliability,
Y. K. Lin, ed., 1992), p.136-139.

Beams, supports

Beams, supports
Commentary on Proposed Specification for Structural
Steel Beams with Web Openings (with Design Example), ASCE Task Committee on Design Criteria for
Composite Structures in Steel and Concrete, ST Dec.
92. p3325-3349.

Prevention of Stress Relaxation in Viscoelastic Struc-tures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

Proposed Specification for Structural Steel Beams with Web Openings, ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3315-3324.

Reliability Analysis of Partially Restrained Steel Connections, Gregory L. Tucker and Richard M. Bennett, ST Apr. 90, p1090-1101.

Apr. 29, p1030-1103.

Bearing capacity

Analysis for Soil Reinforcement with Bending Stiffness,

R. A. Jewell and M. J. Pedley, GT Oct. 92, p1505-1528.

Bearing Capacity of Auger-cast Piles in Sand, William J.

Neely, GT Feb. 91, p331-345.

Bearing Capacity of Expanded-Base Piles in Sand, William J. Neely, GT Jan. 90, p73-87.

Bearing Capacity of Expanded-Base Piles with Compacted Concrete Shafts, William J. Neely, GT Sept. 90, a1206.1236.

p1309-1324.

Bearing Capacity on Nonhomogeneous Cohesive Soils under Embankments, Radoslaw L. Michalowski, GT July 92, p1098-1118.

Bridge Overloading Criteria, Michel Ghosn, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p575-578.

Y. K. Lin, ed., 19921, p575-378.
Bridge Testing—A Surprise Every Time, Baidar Bakht and Leslie G. Jaeger, ST May 90, p1370-1383.
Calibration of Redundancy Factors for Highway Bridges, Michel Ghosn and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p344-371.
The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79.

Eccentrically Loaded Plates on Reinforced Subgrades, Vito A. Guido and John J. Nocera, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1116-1128

Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 1161128.

Efficiency Formula for Pile Groups, Sayed M. Sayed and
Reda M. Bakeer, GT Feb. 92, p.278-299.

Elastic-Plastic Analysis of Footings on Anisotropic Soils,
A. Nanda and T. Kuppusamy, GT Mar. 92, p.428-448.

Failure Criteria Interpretation Based on Mohr-Coulomb
Friction, D. V. Griffliths, GT June 90, p.986-999.

Inventory of Highway Infrastructure Problems Through
Bridge Inspection, Enno Koehn and N. A. Barroeta, El
Apr. 91, p.133-149.

Large-Scale Loading Tests of Shallow Footings in Pneumatic Caisson, Osamu Kussakabe, Yoshito Maeda and
Masatoshi Ohuchi, GT Nov. 92, p.1681-1695.

Optimal Design of Structures with Kinematic Nonlinear
Behavior, S. Pezeshk, EM Apr. 92, p.702-720.

Performance of Axially Loaded Pipe Piles in Sand, Leland M. Kraft, Jr., GT Feb. 91, p.272-296.

Probabilistic Evaluation of Bearing Capacity of Shallow
Foundations, Azm S. Al-Homoud, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.

K. Lin, ed., 1992), p.352-355.

Probing the Golden Gate, Mark A. Ketchum and Al Heldermon, CE June 91, p.42-45.

Reinforced Granular Soil for Track Support, G. P. Raymond, M. S. A. Abdel-Baki, R. G. Karpurapu and R. J.

Bathurst, (Grouting, Soil Improvement and Geosyntheticts, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p.104-1115.

Reinforced Sand Behavior Overlying Compressible
Subgrades, Gerald P. Raymond, GT Nov. 92, p.16631680.

1680.
Residual Deformation Analysis for Inelastic Bridge Rating, Burl E. Disbongh and Theodore V. Galambos, ST June 92, p1494-1508.
Soil Plug Response in Open-Ended Pipe Piles, M. F. Randolph, M. May, E. C. Leong, A. M. Hyden and J. D. Murff, GT May 92, p743-759.
Square and Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Mar. 92, p648-668.
Stability Analysis in Geomechanics by Linear Programing, II: Application, Poon-Hwei Chuang, GT Nov. 92, p1716-1726.

Stability Analysis in Geomechanics by Linear Programming, I: Formulation, Poon-Hwei Chuang, GT Nov. 92, p1696-1715.

32. p1990-119. Stability of Embankments over Weak Soils of Limited Thickness, Radoslaw L. Michalowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1142-1152.

Tomorrow's Schools, Socrates Ioannides and Robert P. Beall, CE Jan. 92, p36-58.
Ultimate Bearing-Capacity Tests on Sand with Clay Layer, Masanobu Oda and Soe Win, GT Dec. 90, p1902-1906.

p1902-1906. Ultimate Load Test of Slab-on-Girder Bridge, Baidar Bakht and Leslie G. Jaeger, ST June 92, p1608-1624. Upper Bound Limit Analysis of Deep Skirt Structures' Foundations, Andrew V. Maller and James D. Murff, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p571-584.

Bearing design Ductility and Detailing Requirements of Bearing Wall Buildings, John W. Wallace and Jack P. Moehle, ST June 92, p1625-1644.

Bearings

Experimental Study of Sliding Isolated Structures with Uplift Restraint, Satish Nagarajaiah, Andrei M. Reinhorn and Michalakis C. Constantinou, ST June 92, p1666-1682.

Temperature Dependent Bridge Movements, Shashi Moorty and Charles W. Roeder, ST Apr. 92, p1090-1105.

Bed load
Bed-Load and Suspended-Load Transport of Nonuniform
Sediments, Prabhata K. Swamee and Chandra Shekhar
P. Ojha, HY June 91, p774-787.
Bed-Load Coefficients, Raul Pacheco-Ceballos, HY Oct.
92, p1436-1442.
Cabesionless Fine-Sediment Bed Forms in Shallow

ohesionless Fine-Sediment Bed Forms in Flows, Peter A. Mantz, HY May 92, p743-764.

Mean Size Distribution of Bed Load on Goodwin Creek, Roger A. Kuhnle and Joe C. Willis, HY Oct. 92, p1443-1446.

Motion of Contact-Load Particles at High Shear Stress, Fidelia N. Nnadi and Kenneth C. Wilson, HY Dec. 92, p1670-1684.

p1670-1684.

Note on Lag in Bedload Discharge, Subhash C. Jain, HY June 92, p904-917.

Prediction Method for Local Scour by Warmed Cooling-Water Jets, S. Ushijima, T. Shimizu, A. Sasaki and Y. Takizawa, HY Aug. 92, p1164-1183.

Summary of Noncohesive Sediment Transport Processes at the Bed/Water Column Interface, David H. Schoellhamer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p375-380.

Bed-Load Coefficients, Raul Pacheco-Ceballos, HY Oct. 92, p1436-1442.

Bed-Load Transport on Transverse Slope. I, Masato Sek-ine and Gary Parker, HY Apr. 92, p513-535. Boundary Shear Stress and Roughness Over Mobile Allu-vial Beds, Peter J. Whiting and William E. Dietrich, HY Dec. 90, p1495-1511.

HY Dec. 90, p1997-1311.

Conceptual Bed-Load Transport Model and Verification for Sediment Mixtures, Shaohua Marko Hsu and Forrest M. Holly, Jr., HY Aug. 92, p1135-1152.

Mechanics of Saltating Grains. II, Masato Sekine and Hideo Kikkawa, HY Apr. 92, p536-558.

New Total Sediment-Load Sampler, Leo C. van Rijn and Moustafa T. K. Gaweesh, HY Dec. 92, p1686-1691.

## d material

Becommership of Steep River Banks and Time Evolution Towards Equilibrium Channel Shape, Agnes Kovacs and Gary Parker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p896-899.

Properties of Various Sediment Sampling Procedures, Panayiotis Diplas and Jon B. Fripp, HY July 92, p955-

Routing of Heterogeneous Sediments over Movable Bed: Model Development, Andre van Niekerk, Koen R. Vogel, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p246-262.

Routing of Heterogeneous Sediments over Movable Bed: Model Verification, Koen R. Vogel, Andre van Niek-erk, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p263-279.

Sediment and Aquatic Habitat in River Systems, ASCE Task Committee on Sediment Transport and Aquatic Habitats, Sedimentation Committee, HY May 92, p669-687.

Bank Erosion Study of the Nile River at Bani Mazar, A. F. Ahmed and M. M. Gasser, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p816-821.

Boundary Shear Stress and Roughness Over Mobile Alluvial Beds, Peter J. Whiting and William E. Dietrich, HY Dec. 90, p1495-1511.

Motion of Contact-Load Particles at High Shear Stress, Fidelia N. Nnadi and Kenneth C. Wilson, HY Dec. 92, p1670-1684.

Bed ripples

Development of Bed Features, Arved J. Raudkivi and Hans-H. Witte, HY Sept. 90, p1063-1079.

Flow Field Induced by Sea Waves Over Brick-Pattern Ripples, G. Vittori, HY Sept. 92, p1241-1259.

The Net-Flux Sediment Concentration Bottom-Boundary Condition for Rippled Beds, César Mendoza-Cabrales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p126-131.

## ledforms

Entrainment of Bed Sediment Into Suspension, Marcelo Garcia and Gary Parker, HY Apr. 91, p414-435.

Garcia and Gary Parker, HY Apr. 91, p414-453. Flow Field Induced by Sea Waves Over Brick-Pattern Ripples, G. Vittori, HY Sept. 92, p1241-1259. Hyperconcentrated Sand-Water Mixture Flows over Ero-dible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1525.

Use of Machine Vision in Bedform Studies, Peter A. Mantz and Wenxue Li, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p840-845.

Beds
Development of Bed Features, Arved J. Raudkivi and
Hans-H. Witte, HY Sept. 90, p1063-1079.
Effects of Porous Bed on Turbulent Stream Flow above
Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92,
p1222-1240.

hobile-Bed Physical Model Tests for the 1992 Olympic Harbour, L. Moreno, C. Tamayo and J. Losada, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p840-849.

Modeling Channel Bed Transients Using Explicit F-D Schemes, B. Morse and R. D. Townsend, HY Nov. 90, p1345-1356.

Velocity Gradient in Filter Backwashing, Mustafa Turan, EE Sept./Oct. 92, p776-790.

A Benchmark Slope Stability Study, Jose L.M. Clemente, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,

II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1520.
The Role of Benchmark Problems in Slope Stability Computations, Stephen G. Wright, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1067-1069.
UTEXAS3 Example Problems, Earl V. Edris, Jr. and Dale F. Munger, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066.

Bending

Analysis of Thick Circular Plates Undergoing Large Deflections, M. Gorji, J. A. Abuyan and K. S. Y. Li, AS Jan, 92, p138-153.

Axial and Free-Bending Analysis of Spiral Strands Made Simple, Mohammed Raoof and Yu Ping Huang, EM Dec. 92, p2335-2351.

Axisymmetric General Shells and Jointed Shells of Revo-lution, Pei Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

Behavior of Concrete-Graphite/Epoxy Sections in Com-posite Bridge Girders, F. Gordaninejad, M. Saitid and N. Wehbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 969-709.

1992), p696-709.
Complete Biaxial Load-Deformation Behavior of RC Col-umns, Gang Gary Wang and Cheng-Tzu Thomas Hsu, ST Sept. 92, p2590-2609.
Creep Behavior Model for Structural Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Aug. 92, p2261-2277.

Crushing Response of Energy Absorbing Composite Structure, Gary L. Farley, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p876-879.

Eigenproperties of a Twisted, Nonuniform Rotating Beam by the Finite Element Method, Alan G. Hernried and Wei-Ming Bian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p924-

Experimental Investigation of Bending and Twisting Coupling in Thin-Walled Composite Beams, Lawrence C. Bank and Steven J. Smith, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 984-887.

Free-Bending Fatigue Life Estimation of Cables at Points of Fixity, Mohammed Raoof, EM Sept. 92, p1747-1764

1764.

High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheinman, EM May 92, p1026-1043.

Laboratory Testing of Mechanical Rock Bolts, Koon Meng Chua, Jerry Lovato and Roy Cook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1058.

Niedzwecki, ed., 1992), p1035-1038. Large Deformation Elastic Behavior of Low-Density Solid Foams, William E. Warren and Andrew M. Kray-nik, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p143-146. Load-Duration Effects in Structural Lumber: Strain Ener-gy Approach, Kenneth J. Fridley, R. C. Tang and Law-rence A. Soltis, ST Sept. 92, p2351-2369.

A Shear Locking Free Three-Node Triangular Plate Bending Element for Moderately-Thick and Thin Symmetrically Cross-Ply Laminated Plates, Humayun R. H. Kabir, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p552-555.
Structural Materials from Lunar Simulants Through Theunal Liquefaction, Chandra S. Desai and Kirsten Girdner, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p528-536.
Transition Plate-Bending Elements for Compatible Mesh Gradation, Chang-Koon Choi and Yong-Myung Park, EM Mar. 92, p462-480.
Unidirected Twined-Strand Composites and Their Uses,

List Mar. 92, p462-480. Unidirected Twined-Strand Composites and Their Uses, Charles E. Kaempen, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p546-559.

Bending moments
Bending of Rectangular Cross-Section Cantilever with Cylindrical Cutouts, A. K. Naghdi, EM Apr. 92, p831-842.

Locally Buckled Plastic Hinge Behavior Under Monoton-ic and Cyclic Loading Condition, Eun-Taik Lee and G. C. Lee, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.

C. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.

Moving Hinge in Large-Displacement Problems, F. Lu and A. N. Sherbourne, EM Sept. 92, p1840-1849.

Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou, Nikolaos Pievris and Nikola Deukovic, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717.

Response of Plates of Arbitrary Shape Subject to Static Loading, K. M. Liew, EM Sept. 92, p1783-1794.

Spatial Variability Effects on the Seismic Response of Models of Bridges, Aspasia Zerva, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p172-175.

Stability of Beams in Eccentrically Braced Frames, M. D. Engelhardt, K. C. Tsai and E. P. Popov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1043-1046.

Niedzwecki, ed., 1992, p1043-1046.

Vies of Drilled Shafts in Stabilizing a Slope, Lymon C. Reese, Shin-Tower Wang and Jeffrey L. Fouse, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332.

Wheel Loads from Highway Bridge Strains: Field Studies.

Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771.

90, pl/31-1771.

Benefit cost analysis
Benefit-Cost Ratios: Failures and Alternatives, Jay R.
Lund, WR Jan./Feb. 92, p94-100.
Conflicts in Health and Safety Matters: Between a Rock and a Hard Place, Richard C. Schwing, (Risk-Based Decision Making in Water Resources V. Yacov Y.
Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p135-147.
Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Ports '92, David Torseth, ed., 1992), p737-748.
Estimating Accident Benefits of Reduced Freeway Congestion, Edward C. Sullivan, TE Mar./Apr. 90, p167-180.

180.

Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Motrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210.

Groundwater Recharge as a Reclaimed Water Transport Mechanism, Thomas G. Richardson and Nereus L. Richardson, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p61-66.

Identifying Promising Heardous Waste Reduction Tech-

Linaweaver, ed., 1992), p61-66.
Identifying Promising Hazardous Waste Reduction Technologies, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p139-144.
Implications of Design Uncertainty in Benefit-Cost Analysis, Anand Prakash, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p120-125.

Life-Cycle Considerations in Urban Infrastructure Engineering, David Novick, ME Apr. 90, p186-196. Method for Preevaluation and Selection of Road Projects in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-

Moving Toward a Probability-Based Risk Analysis of the Benefits and Costs of Major Rehabilitation Projects, Daniel B. Taylor, Keith D. Hofseth, Leonard A. Shabman and David A. Moser, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), pl 48-A. N 173.

Optimal Allocation of Resources in Repair and Mainte-nance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4.

Probability Distribution for Benefit/Cost Ratio and Net Benefit, Yeou-Koung Tung, WR Mar./Apr. 92, p133-

Benefit cost ratios

Benefit-Cost Ratios: Failures and Alternatives, Jay R.

Lund, WR Jan./Feb. 92, p94-100.

Lund, WR Jan./Feb. 92, p94-100.

Probability Distribution for Benefit/Cost Ratio and Net Benefit, Yeou-Koung Tung, WR Mar./Apr. 92, p133-

Beachts

Civil Engineering Experience and Education, Semra Siber Ulustam, El Jan. 92, p71-76.

The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48.

Preliminary Assessment of the Benfits of Derating a Cask for Increasing Age/Burmup Capability, B. L. Broadhead, C. V. Parks, D. S. Joy and J. S. Tang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2182-2182. p2182-2189.

Bentonite
Diffusion of Radionuclides in Compacted Bentonite,
Jong-Won Choi, Choong-Hwan Jung, Kwan-Sik Chun,
Hyun-Soo Park, Joo-Ho Whang and Byung-Hun Lee,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p2278-2283.

Effects of Mixing on Rheological Properties of Microfine
Cement Grout, Lois G. Schwarz and Raymond J.
Krizek, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p512-525.

Fracture Grouting with Bentonite Sturries, C. Ran and J.
J. K. Daemen, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O. Holtz,
ed. and Ilan Juran, ed., 1992), p360-371.

Hazardous Waste Containment with a Bentonite Cutoff

ed. and Ilan Juran, ed., 1992), p.500-571.
Hazardous Waste Containment with a Bentonite Cutoff Wall, Chikashi Sato, Derek A. Braithwaite, Angelos Protopapas and Paul P. Stewart, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1298-

Hydraulic Conductivity of Landfill Liners Containing Benzyliriethylammonium-Bentoniet, James A. Smith, Pamela M. Franklin and Peter R. Jaffé, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p186-

Hydraulic Conductivity of Three Geosynthetic Clay Liners, Paula Estornell and David E. Daniel, GT Oct. 92, p1592-1606.

92, pl.592-1606.
Interaction of Inorganic Leachate with Compacted Pozzolanic Fly Ash, Tuncer B. Edil, Linda K. Sandstrom and P. M. Berthouex, GT Sept. 92, pl.410-1430.
Mars Containers: Dust on Teflon Sealing Surfaces, H. V. Lauer, Jr. and J. H. Allton, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p508-517.
Properties of Cement Grouts and Grouted Sands with Additives, C. Vipulanandan and S. Shenoy, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p506-510.

psub-511.

Rheological Properties of Microfine Cement Grouts with Additives, Ulf Hakansson, Lars Hässler and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p551-563.

Seepage Control in Kaolinite Clay with Simulated Cracks, C. Vipulanandan and M. Leung, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1054-1066.

Selection and Laboratory Evaluation of Modifying Additives for Soil-Cement-Bentonite, T. S. McFarlane and R. D. Holtz, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1006-1018.

lian Juran, ed., 1992), p1006-1018. imple and Efficient Methods to Produce Construction Materials for Lunar and Mars Bases, Yoji Ishikawa, Tetsuo Sasaki and Tetsumi Higasayama, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1335-1346.

Stabilizing Compacted Clay Against Chemical Attack, Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567.

90, p139-1309.
190, p139-1309.
Use of a Method Specification For In Situ Compaction of Clay-Based Barrier Materials, B. H. Kjartanson, N. Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1129-1136.

Use of Cement-Bentonite for Cutoff Wall Construction, B. L. Kilpatrick and S. J. Garner, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p803-

Bay Ridge, Anne Arundel County, Maryland Offshore Breakwater and Beach Fill Design, Edward T. Fulford and Kenneth M. Usah, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p205-220.

Breakwater Breakthrough—Bold New Breakwaters, William F. Baird, Kevin Hall and Virginia Fairweather, CE Jan. 87, p45-48.

Cement-Stabilized Soil for Coal Retaining Berms, Gary J. Van Riessen and Kenneth D. Hansen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p981-

772... Hydraulic Design of Offshore Breakwater in Sergipe, Brazil, Otavio J. Sayao and Charles P. Fournier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693.

1992, poi-9-093.

Hydrodynamic Forces and Evolution of a Nearshore Berm at South Padre Island, Texas, James A. Aidals, Neil T. McLellan and Cheryl E. Burke, (Hydradiic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239.

Application of Traffic Engineering Concepts to Pleasure Boat Traffic, Russell H. Boudreau, Michael C. Leue and James R. Walker, (Ports '92, David Torseth, ed., 1992), p248-262.

A Computational Berthing Model for the Design of Fender Systems, John R. Headland, (Ports '92, David Torseth, ed., 1992), p480-492.

Container Terminal Gates Flexible Design for a Dynamic Environment, Larry Nye, (Ports '92, David Torseth, ed., 1992), p912-925.

Floating or Fixed Dock for RO/RO Ship Operations, Bankim Mallick and Curtis L. Ratcliffe, (Ports '92, David Torseth, ed., 1992), p709-722.

Honolulu Harbor Ship Traffic Simulation and Animation Study, James R. Walker, Vedat Demirel and Michael C. Leue, (*Ports* '92, David Torseth, ed., 1992), p868-

Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (*Ports '92*, David Torseth, ed., 1992), p376-389.

Model Tests for Expansion of Anaheim Bay Naval Har-bor, Robert R. Bottin, Jr. and Dan Muslin, (Ports '92, David Torseth, ed., 1992), p768-776. Modifications to Coal Pier 6 Made Necessary by a Deeper Channel, Zolan Prucz, Barney T. Martin and Jerry L. Richstein, (Ports '92, David Torseth, ed., 1992), p164-

Pile Installation and Testing at Ningbo Port, China, Ray-mond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.

Port of Portland's Berth 601 Floating Dock, Elmer W. Ozolin and Walter R. Haynes, (Ports '92, David Torseth, ed., 1992), p150-163.

Pre-Compression of Concrete Breasting Dolphins Solves Construction Problem, Robert A. Blowers, Alexander Matlin and Antoni J. Zelechowski, (Ports '92, David Torseth, ed., 1992), p602-615.

Ship-Berth Link as Bulk Queueing System in Ports, Zoran R. Radmilovich, WW Sept./Oct. 92, p474-495.

Signing Systems: Directional, Identity, and Graphic Systems for the Port of Long Beach, Mackey W. Deasy, Wayne Hunt and Louis Rubenstein, (Ports '92, David Torseth, ed., 1992), p85-93.

Uggrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alexander Surko, Jr., (Ports '92, David Torseth, ed., 1992), p802-814.

U.S. Navy Deployable Waterfront Facility, Glenwood Bretz, Julio Giannotti and Arturo Calisto, (Ports '92, David Torseth, ed., 1992), p520-534.

West Point Temporary Construction Dock, Chris Sundberg and Jerry Stubbs, (Ports '92, David Torseth, ed., 1992), p723-736.

1992), p723-736.

Biaxial bending
Concrete Box Sections Under Biaxial Bending and Axial
Load, Cengiz Dundar, ST Mar. 90, p860-865.

Design Aids for Reinforced Concrete Columns, Bao-Jun
Sun and Zhi-Tao Lu, ST Nov. 92, p2986-2995.

Design of RC Sections with Generic Shape under Biaxial
Bending, Andrea Dall'Asta and Luigino Dezi, ST Apr.
92, p1138-1143.

Out-of-Plane Strengths of Steel Beams, S. Bild, G. Chen
and N. S. Trahair, ST Aug. 92, p1987-2003.

Blaxial loads
Complete Biaxial Load-Deformation Behavior of RC Columns, Gang Gary Wang and Cheng-Tzu Thomas Hsu,
ST Sept. 92, p2590-2609.

Biaxial stress

Stress-Strain Curves for Brick Masonry in Biaxial Com-pression, Krishna Naraine and Sachchidanand Sinha, ST June 92, p1451-1461.

Bibliographies

ASCE Annual Combined Index—1991, American Society
of Civil Engineers, Publications Division, 1992, 087262-886-8, 1036pp.
Fixed Rail Service to Airports: Bibliography, Fixed Rail
Service to Airports Subcommittee of the ASCE Landside Committee, (International Air Transportation: A
New International Airport, Robert E. Boyer, ed., 1992),
p323-244. p232-234

p232-234.

Text and Reference Books on Knowledge Acquisition and Machine Learning, Yoram Reich, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p204-214.

Transactions of the American Society of Civil Engineers—1991, vol. 156, American Society of Civil Engineers, Publications Division, 1992, 0-87262-883-3, 694pp.

Bids
Accepted but Unapproved Bid Yields No Guarantee, CE
May 92, p28.
Bidding Strategy: Winning over Key Competitors, F. H.
(Bud) Griffis, CO Mar. 92, p151-165.
CM Launches 'Pre-Emptive Strike' in Bid Documents,
CE June 92, p18,20.
Critical Success Factors in Winning BOT Contracts,
Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.
Implied Warranty Not Found in Bid Data, CE Nov. 92,
p30.
Multiparameter Bidding Systems.

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Mar. 92, p142-150.
Only Taxpayers Can Question Bids, CE Dec. 92, p28.
Opportunities and Constraints for the Innovative Geotechnical Contractor, Peter J. Nicholson and Donald A.
Bruce, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p46-64.
Overhead and Profit on Change Orders, Hamid Sarvi, CE Aug, 92, p59-61.
Selection of Design/Ruild Proposal Main Expansion.

Aug. 92, p.39-01.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p.303-317.

Standing Room Only at Portland Bid Meeting, CE Dec. Unit Pricing and Unbalanced Bids, Norman A. Nadel, CE June 91, p62-63.

Bifurcations

Bifurcations and Chaos in Structural Control, K. Hackl, A. Cheng, C. Y. Yang and M. Chajes, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p664-667.

Branch Switching in Bifurcation of Structures, Fumio Fujii and Kok Keong Choong, EM Aug. 92, p1578-1596.

Direct Tensile Test: Stability and Bifurcation, Zdeněk P. Bažant and Luigi Cedolin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p357-360.

Dynamic Behavior of Nonlinear Cable System. II, S. Mesarovic and D. A. Gasparini, EM May 92, p904-920. Evaluation of Plastic Bifurcation for Plane Strain versus Axisymmetry, Dunja Perić, Kenneth Runesson and Stein Sture, EM Mar. 92, p512-524.

Thow in a Model Symmetric Bifurcation, B. B. Lieber, Y. Zhao and J. H. Citriniti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p840-843.

1992), p840-843.
Fluid Dynamics at the Carotid Bifurcation, A. S. Anayiotos, D. P. Giddens, S. A. Jones, S. Glagov and C. K. Zarins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-847.
The Initiation of Bifurcations and Localization in Damaging Materials, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p365-368.
Nonlinear Stability of Differential Surge Chambers, Xiao-Liang Yang and Chen-Shan Kung, HY Nov. 92, p1526-1539.

inders, ma

Binders, materials
Electric Arc Furnace (EAF) Slag as an Aggregate in Asphalt Concrete, Kit M. Lum, Yiik-Diew Wong and Soo-Loi See, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p240-249.
Overlays on Deck, Paul Tarricone, CE Sept. 92, p42-45.
Physicochemical and Rheological Properties of Microwave Recyled Asphalt Binders, Laurand H. Lewandowski, Rogers Graham and Jim Shoenberger, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p449-461.
A Study on the Utilization of Incinerator Residue for Asphalt Concrete, Kit M. Lum and Joo-Hwa Tay, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p217-229.

Bin-Wall Failure Caused by Eccentric Discharge of Free-Flowing Grain, R. A. Bucklin, S. A. Thompson and I. J. Ross, ST Nov. 90, p3175-3190.

esign Implications of Measured Pressures and Strains in Silos, Geoffrey E. Blight, ST Oct. 92, p2729-2742.

Interpreting Dredge Material Bioassay Data—COBIAA, Charles H. Lutz, Thomas M. Dillon, Mark H. Houck and Jeff R. Wright, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p108-113.

OSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, N. H. Tang, D. J. W. Blum, R. E. Speece and N. Nirmalakhandan, EE Jan/Feb. 92, p17-37. Water, Endangered Ecosystem: Assessment of Chemical Pollution, Werner Stumm, EE July/Aug. 92, p466-476.

Biochemical oxygen demand
BOD Test for Tropical Countries, Nilay Choudhari, Paritosh C. Tyagi, N. Niyogi, V. P. Thergaonkar and P. Khanna, EE Mar/Apr. 92, p298-303.
Improved Performance of Activated Sludge with Addition of Inorganic Solids, Robert B. Bowen and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p474-479.
Metal Hydroxide and Metal Oxide Enhanced Activated Sludge: An Industrial Strength Wastewater Treatment Process, Robert B. Bowen, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p646-655.

Modeling DO Conditions in Streams with Dispersion, Antonis D. Koussis, Prashant Kokitkar and Adosh Mehta, EE May/June 90, p601-614. Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, p418-429. Treatment of Contaminated Groundwater Using Chemical Oxidation, Mark E. Zappi, Beth C. Fleming and M. John Cullinane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1184-1189.

pi184-1189.

Biodegradation

Atrazine Biodegradation in Biological GAC Columns, M.

K. Banks and C. M. Huang, [Environmental Engineing: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p516-519.

Development of a Protocol to Evaluate Volatility and

Biodegradability Characteristics of Turpene-Based Solvent Substitutes, Benerito S. Martinez, Jr., Ricardo B.

Jacquez and Walter H. Zachritz, II., (Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p169174.

In-Vessel Compost Systems: Technology Status, Philip E. Smith and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p291-296.

Modeling of Toxic Wastewater Treatment by Expanded-Bed Anaerobic GAC Reactors, G. F. Nakhla and M. T. Suidan, EE July/Aug. 92, p495-512.

Biochemical Control of Sulfide Production in Wastewater Collection Systems, Ricardo B. Jacquez and Hamdy H. El-Rayes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p327-333.

Biographies
1992 Officers are Nominated, CE July 92, p80-83.
A. E. Komendant, Structural Engineer, Dies at 85, NE Nov. 92, p5.

Alf Johnson, Interstate Highway Pioneer, Dead at 84, NE June 92, p5.

ASCE Celebrates Its Finest, Elevating Seven to Honorary Membership, NE Dec. 92, p3.

ASCE National Awards Presented at Society's New York Convention, NE Dec. 92, p4-8. Bill Gibbs, Former ASCE President, Dies at 73, CE June

92, p82. Death Claims Two ASCE Honorary Members, CE Nov. 92, p76.

Engineer Pioneered Daring Docks During WWII (ltr), Eugene H. Harlow, CE June 92, p38.

Family Establishes New Program for CERF—and Lasting Tribute to Ken Roc, NE Apr. 92, p3.

Fordice Elected Mississippi Governor, Card Joins President Bush's Cabinet, NE May 92, p16. G. Brooks Earnest, ASCE Past President, Dies at Age 90, CE Nov. 92, p76.

International Director, CE July 92, p83,85.

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John Tesoro, Who Led ASCE Efforts to Document Statue of Liberty Restoration, Dies at 49, NE Aug. 92, p6.
Jose Orozco, Dead at 88, Was Dam Engineer in Mexico, NE June 92, p5.
Louis Cohen, Retired Federal Official, Dies at 69, NE Dec. 92, p15.

Seven Members NE May 92, p3 bers Elevated to ASCE Honorary Member,

Two Candidates in Contest for ASCE President-Elect, CE July 92, p80.

Biological operations
Finite/Macroelement Meshes in Neural Rat Growth,
Mona E. McAlarney, Letty Moss-Salentijn, Melvin L.
Moss and Manjit Basra, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p960-963.

Flow Dynamics in an End-to-End Vascular Graft Junction, Y. H. Kim and K. B. Chandran, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p964-967.

Flow in a Model Symmetric Bifurcation, B. B. Lieber, Y. Zhao and J. H. Citriniti, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p840-843.

Flow Visualization Studies in the Novacor Left Ventricular Assist System, Harvey S. Borovetz, Frank Shaffer, Richard Schaub, Laura Lund and John Woodard, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p713-716.

Fluid Dynamics at the Carotid Bifurcation, A. S. Anayiotos, D. P. Giddens, S. A. Jones, S. Glagov and C. K. Zarins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-847.

Form Comparison Without Anatomical Landmarks, Gautam Dasgupta, Mona E. McAlarney, Colin Goodall, Letty Moss-Salentijn and Melvin L. Moss, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975.

A Hydraulic Study of Venous Valve Closure, Shi-kang Wang, Yu-chen Qiu and Ned H. C. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p697-700.

An Integrated Human/Plant Metabolic Mass Balance Model, A. B. Thompson, J. R. Schulz and C. G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p7177-1788.

Intra Vena Cava Balloon Pumping, Tin-Kan Hung, Thomas E. Natan, Hua-qiang Li, Frank R. Walters and Brack G. Hattler, (Engineering Mechanics, Loren D. Lutes, ed., 1992), p709-112.

Lutes, ed. and John M. Niedzwecki, ed., 1992), p709-712.

Inverse Problems in Biomechanics, Utpal Roy and Gautam Ray, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p980-983.

Leakage Characteristics of the St. Jude Heart Valve, Theresa E. Brandner and Yi-Ren Woo, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708.

Lumped Parameter Model for the Dynamics of the Pulmonary Circulation, B. B. Lieber, Z. Li and B. J. B. Grant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p848-851.

A Multiple Disk Centrifugal Pump as an Artifical Ventricle, Gerald E. Miller and Amrita Sidhu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p976-979.

Numerical Simulations of Diastolic Flow Patterns in a Model Left Ventricle with Varying Degrees of Mitral Stenosis, Richard T. Schoepboerster and Erick A. Gonzalez, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p968-971.

Pressure Losses Across Sequential Stenoses in Collapsible Tubing, Maria Siebes and Binu John, (Engineering Mechanics, Loren D. Lutes, ed., 1912), p832-835.

Pulmonary Artery Velocity Profiles in Young Lambs, Belinda Ha. Hiroshi Katayama. Robert Krzeski Caroll.

ed., 1992), p832-835.
Pulmonary Artery Velocity Profiles in Young Lambs, Belinda Ha, Hiroshi Katayama, Robert Krzeski, Carol L. Lucas, G. William Henry, Patricia Lynch, Ajit P. Yoganathan, Jose I. Ferreiro and Benson R. Wilcox, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p836-839.
Systolic Anterior Motion of the Mitral Valve: In Virolines, Xavier P. Lefebvre, Shengqiu He, Robert A. Levine and Ajit P. Yoganathan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p701-704.
Understanding the Medical Applications of Radionu-

ed., 1992), pt. 108-108. Understanding the Medical Applications of Radionuclides, Darrell W. McIndoe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1478-1484.

Biological treatment
Activity of Biomass in RBC System Treating Pulp Industrial Wastewater, Boshou Pan and L. Hartmann, EE
Sept./Oct. 92, p744-754.

Sept./Oct. 92, p/44-754.
Atrazine Biodegradation in Biological GAC Columns, M. K. Banks and C. M. Huang, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p516-519.
Conditioning and Dewatering of Anaerobically Digested BPR Sludge, William R. Knocke, Jeffrey W. Nash and Clifford W. Randall, EE Sept./Oct. 92, p642-656.

Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, Paul A. Dombrowski and James C. O'Shaughnessy, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p36-41.

Pull Scale Side-By-Side Testing of BNR Technologies, Bruce B. Burns, Angela S. Essner, Dave L. Montgomery, Amarjit Sokhey and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p30-35.

Roger W. Babcock, Jr., Chwen-Jeng Tzeng, Simlin Lau and Michael K. Stenstrom, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p468-473.

Mechanism of Biological Treatment in Plug-Flow or Batch Systems, Hasan Ali San, EE July/Aug. 92, p614-628.

Metallurgical Residue for Solubilization of Metals from Sewage Sludge, D. Couillard and G. Mercier, EE Sept./ Oct. 92, p808-813. Model for Biological Reactors Having Suspended and At-tachded Growths, Chi-Yuan Lee, EE Nov./Dec. 92,

p982-987.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Nitrogen Removal at Baltimore's Back River WWTP, Robert J. Andryszak, Amarjit S. Sokhey, Jaswant S. Dhupar and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p617-622.

Hons, F. Pietre Linaweater, ed., 1992, pol 17622.
Hot-scale Anaerobic Biological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapil Sabharwal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450.

Process Design for Bioremediation of Nitrogen-Species Contamination of Soils and Groundwater, Paul D. Turpin, J. Michael Henson and Steven L. Martin, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.

Treatability Study on the Biological Treatment of Land-fill Leachate and Gas Condensate, Bill Y. Liu, Alan Y. Li and James F. Urek, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p405-410.

Activity of Biomass in RBC System Treating Pulp Indus-trial Wastewater, Boshou Pan and L. Hartmann, EE Sept./Oct. 92, p744-754.

Effect of Nitrogen on Yield Using Bioenergetics Theory, R. L. Droste, EE Sept./Oct. 92, p814-820.

Model for Biological Reactors Having Suspended and Attached Growths, Chi-Yuan Lee, EE Nov/Dec. 92, p982-987.

A Preliminary Evaluation of Transport Mechanisms for Multiple Substrates in a Laboratory Column System, Zhihuai Xue and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p180-185.

State of the Art in Other Ocean Energy Sources, Richard J. Seymour and Preston Lowrey, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p258-275.

## Biomechanics

Investigation of Zebra Mussel Adhesion Strength Using a Rotating Disk, Josef Daniel Ackerman, C. Ross Ethier, D. Grant Allen and Jan K. Spelt, EE Sept./Oct. 92, p708-724.

Assessing the Reliability of the Water Supply to a Closed Basin Wetlands, John C. Tracy and James K. Koelliker, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p445-430.

Novel Photoelastic Approach in Analysis of Elliptical Holes in Thick Plates, Sameh S. Issa and G. A. Maamoun, EM Aug. 92, p1631-1645.

An Airfield Pavement Forensic Analysis: Cairo East Air Base, Randolph Charles Ahlrich and Gary Lee Anderton, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 1889-1889-18

psys-22. Electric Are Furnace (EAF) Slag as an Aggregate in Asphalt Concrete, Kit M. Lum, Yiik-Diew Wong and Soo-Loi See, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergesson, ed., 1992), p240-249. Road Aggregate Choice Based on Silicate Quality and Bitumen Adhesion, Petri V. Peltonen, TE Jan/Feb. 92,

p50-61.

Strain and Stress Measurements in Pavements, Matti Huhtala and Jari Pihlajamilki, (Road and Airport Pave-ment Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p229-243.

## Blast loads

Dynamic Response Analysis of Reinforced-Soil Retaining Wall, Muthucumarasamy Yogendrakumar, Richard J. Bathurst and W. D. Liam Finn, GT Aug. 92, p1158-

# Blasting

Blasting
Construction Induced Vibration in Urban Environments,
Barry M. New, (Excavation and Support for the Urban
Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p212-239.
Densification of Loose Sands by Deep Blasting, Ulrich La.
Fosse and Theodore von Rosenvinge, IV, (Grouting,
Soil Improvement and Geosynthetics, Roy H. Borden,
ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),
p954-968. p954-968

The Durability of Rubble Mound Armour in Service—A Case Study, Terry Piggott, Sam Smith and Angus Jack-son, (Durability of Stone for Rubble Mound Breakwat-ers, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p254-267.

Frequency Based Control of Urban Blasting, Charles H. Dowding, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p181-211.

Postdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115.

Producing Armourstone Within Aggregate Quarries, Huanjin Wang, John-Paul Latham and Alan B. Poole, (Durability of Stone for Rubble Mound Breakwaters, Or-ville T. Magoon, ed. and William F. Baird, ed., 1922), p200-210.

p200-210.

Recent Experience With Armor Stone Cracking in the Buffalo District, David W. Marcus, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p222-237.

Some Case Histories of Armor Stone Production, Mel Hill, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p212-221.

Time Derendent Cone. Penetration Resistance Due to

1792b, p212-221.
Time-Dependent Cone Penetration Resistance Due to Blasting, Wayne A. Charlie, Mutabihirwa F. J. Rweby-ogo and Donald O. Dochring, GT Aug. 92, p1200-121.
Tunneling in the Urban Environment, Norman A. Nadel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p172-180.

p1/2-180.
Use of Explosives on the Moon, Richard D. Dick, William L. Fourney, Deborah J. Goodings, Chaun-Ping Lin and Leonhard E. Bernold, AS Jan, 92, p59-69.
Wave Propagation in Solids, A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

Investigation of a Concrete Blistering Failure, R. S. Rol-lings and G. S. Wong, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30.

Behavior of Concrete Hollow-Block Masonry Prisms under Axial Compression, T. P. Ganesan and K. Ramamurthy, ST July 92, p1751-1769.

Computation of Wind Pressures on L-Shaped Buildings, Theodore Stathopoulos and Yongsheng Zhou, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p349-352.

Nietzwecxi, ed., 1992), p.349-352.

A New Concrete Armor Unit for Breakwaters: The "Beta Block" José Maria Berenguer, Vicente S. Naverac and José Manuel de la Peña, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-6-78.

Producing Armourstone Within Aggregate Quarries, Huanjin Wang, John-Paul Latham and Alan B. Poole, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p200-210.

Stability of Accropode(R) and Comparison with Paral-lelepipedic Block, Braulio G. Madrigal and José Loza-no, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p704-717.

Use of Shi's Discontinuous Deformation Analysis on Rock Slope Problems, Man-chu Ronald Yeung and Richard E. Goodman, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), 461-478.

Application of Traffic Engineering Concepts to Pleasure Boat Traffic, Russell H. Boudreau, Michael C. Leue and James R. Walker, (Ports '92, David Torseth, ed., 1992), p248-262.

Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (*Ports* '92, David Torseth, ed., 1992), p275-287.

Planning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik), (Ports '92, David Torseth, ed., 1992), p937-938.

Cyclic Behavior of End-Plate Moment Connections, Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2917-2930.

Prying and Shear in End-Plate Connection Design, Cam-eron P. Chasten, Le-Wu Lu and George C. Driscoll, ST May 92, p1295-1311.

Bond Anchorage of Pretensioned FRP Tendon at Force Release, Antonio Nanni, Masaharu Tanigaki and Koi-chi Hasuo, ST Oct. 92, p2837-2854.

Crack Analysis of Reinforced Concrete Tension Members, H. C. Chan, Y. K. Cheung and Y. P. Huang, ST Aug. 92, p2118-2132.

Cracking Response of RC Members Subjected to Uniaxi-al Tension, Gaetano Russo and Filippo Romano, ST May 92, p1172-1190.

Fiber Pullout and Bond Slip. I: Analytical Study, Antoine E. Naaman, George G. Namur, Jamil M. Alwan and Husam S. Najm, ST Sept. 91, p2769-2790.

Reinforcement Anchorage Slip under Monotonic Load-ing, Jaber M. Alsiwat and Murat Saatcioglu, ST Sept. 92, p2421-2438.

## Bonding

Analytical Modeling of Bonded Bars under Cyclic Loads, Parviz Soroushian, Kienuwa Obasaki and Shashidhara Marikunte, ST Jan. 91, p48-60.

FRP-Reinforced Wood as Structural Material, Nikolaos Plevris and Thanasis C. Triantafillou, MT Aug. 92, p300-317.

Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, Ali M. Hamza and Antoine E. Naaman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p996-999.

Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, Kwang W. Kim, Bong H. Lee, Jescon Park and Young S. Doh, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343.

Reliability-Based Design for Feeeze-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p462-475.

# nding strength

ond Strength in Battened Composite Columns, Yasser M. Hunaiti, ST Mar. 91, p699-714.

Bonding Strength of Grouts and Behavior of Silicate Grouted Sand, C. Vipulanandan and A. Ata, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), ed., Rober p700-711.

p. 100-711.

In-Place Shear Testing of Tile, Arthur P. Reed, Bruce A. Suprenant and Jim Acri, MT Aug. 92, p264-274.

Properties of Aggregate-Cement Interface for High Performance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p852-855.

Bonds, contracts Insurance Change May Save Millions, CE July 92, p11. Underwriting Process for Construction Contract Bonds, Jeffrey S. Russell, ME Jan. 92, p63-80.

Border irrigation Interpretation of Kostiakov Infiltration Parameters for Borders, D. M. Hartley, IR Jan./Feb. 92, p156-165.

Borders, D. M. Hartley, IR Jan./Feb. 92, p136-165.

Borchole geophysics

Artificial Recharge Feasibility Evaluation by Field Investigation, Maury E. Ford, Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Scott Keys, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647.

Geoelectrical Tomography: Model Studies Related to Nuclear Waste Site Characterization, Thomas E. Owen and Vernon R. Sturdivant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p304-307.

reboles

Boreholes
Construction Applications of Relational Data Bases in Three-Dimensional GIS, Amr A. Oloufa, C. S. Papacostas and Reynaldo Espino, CP Jan. 92, p72-84. Dynamics of Saturated Rocks. IV: Column and Borehole Problems, Irene Vgenopoulou and Dimitri E. Beskos, EM Sept. 92, p1795-1813. Gradual Development of Bores in Canal Systems, Theodor Strelkoff, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p456-461. Site Investigation Equipment Developed by Teollisuuden Voima Oy, Henry Ahokas, Antti Ohberg, Heikki Hinkkanen and Pekka Rouhiainen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p1092-1098. Strontium Isotope Geochemistry of Calcite Fracture Filings in Deep Core, Yucca Mountain, Nevada—A Progress Report, Z. E. Peterman, J. S. Stuckless, B. D. Marshall, S. A. Mahan and K. Futa, (High Level Radioactive Waste Management, Program Committee, 1992), p1582-1586.

System Selection of Concepts for Direct Disposal of Sent! Evel K. Enifeld & D. Concepts of Concepts of Concepts of Sent! Evel K. Enifeld & D. Concepts of Concepts of Concepts of Sent! Evel K. Enifeld & D. Concepts of Concepts o

p1582-1586.
System Selection of Concepts for Direct Disposal of Spent Fuel, K. Einfeld, K. D. Closs and U. Knapp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1860-1866.
A Wax-Coupled Borehole Seismic Detector for High-Resolution Measurements, Thomas E. Owen and Jorge O. Parra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p535-538.

and John M. Niedzwecki, ed., 1992), p535-538.

Borting
Bearing Capacity of Auger-cast Piles in Sand, William J.
Neely, GT Feb. 91, p331-345.

Case Study of an Offshore Horizontal Boring, John T.
Robinson, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p697-712.

Experimental Study of Underground Exploration by
Auger Boring on a Mars Rover, Masaki Kojima, Kenji
Saitou, Yutaka Kaneko and Nobuki Kawashima, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p416-426.

Geological Mappability of Bored Versus Drill and Blast
Excavations for Radioactive Waste Repositories, Bjorn
Nilsen and Levent Ozdemir, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p199-1506.

TBM Performance Prediction in Yucca Mountain Welded Tuff From Linear Cutter Tests, Richard Gertsch,
Levent Ozdemir and Leslie Gertsch, (High Level Radioactive
Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p1516-1520.

Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, Kalyan K. Bhattacharyya, Richard McDonald and Robert S. Saunders, High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1902)—153-153-153-153-153-153-153 1992), p1521-1526.

Tunneling Set to Begin on Boston Harbor Tunnel, CE Apr. 92, p12.

Boston's City within a City, Paul Tarricone, CE Oct. 92, p40-43.

Cofferdam is the Shape of Things to Come, CE Dec. 92, p21-22

p21-22. Estimating Urban and Suburban Sewerage Flows with Assistance of GIS Technology, Paul Kirshen, Daniel Nvule and John Corlins, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p208-212.

Property of the Artery, David L. Druss and Burton P. Kassap, CE Jan. 92, p44-46. Historic Seawalls of the Boston Harbor, Massachusetts Region: Evolution, Construction and Repair, David B. Vine and Peter S. Rosen, (Ports '92, David Torseth, ed., 1992), p849-867.

1792, posy-so-free Flushing of Boston Harbor, Massachusetts, Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p594-606.

Boulders
Stabilization of Pier Foundation Using Jet Grouting Techniques, R. Parry-Davies, R. M. H. Bruin, G. Wardle and M. G. Nixon, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p156-168.

undaries

Ductility and Detailing Requirements of Bearing Wall Buildings, John W. Wallace and Jack P. Moehle, ST June 92, p1625-1644.

Boundary characteristics
Boundary-Conforming Coordinate System for Groundwater and Contaminant Transport Modeling, Xiaoxia
Zhao and Victor L. Zitta, (Hydraulic Engineering: Saing a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p192-197

Boundary conditions

Analytical Prediction of Gasoline Thickness on the Water
Table, M. Yavuz Corapcioglu, Rajasekhar Lingam and
Vern K. Haisler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p254-

An Analytical Solution to a Clamped Cylindrical Panel with Anti-Symmetric Angle-Ply Laminations, Humayun R. H. Kabir and J. B. Kennedy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Boundary Conditions for Sediment-Laden Flows, Mar-celo H. Garcia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p404-

Effects of Dead Loads in Dynamic Plates, Hideo Takaba-take, ST Jan. 92, p34-51.

Evaluation of Modelling Parameters for Simulation of Es-tuarial Systems, Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaudding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p707-719.

Exact Solution for General Torsion Problems Using Boundary Singularities, Omri Rand, EM Oct. 92, p2141-2147.

Granular Flow on a Bumpy Inclined Chute, Marijan Ba-bić, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1024-1027.

Incorporating Hydraulic Structures in an Open-Channel Model, Eric D. Swain, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1118-1123

The Net-Flux Sediment Concentration Bottom-Boundary Condition for Rippled Beds, César Mendoza-Carbaile (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p126-131.

and Nani G. Bhowmik, ed., 1992), pl 26-131.

Open Boundary Condition for Multiple Level FE Tidal

Current Flow Analysis, Toshio Kodama and Mutsuto

Kawahara, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jeanings, ed. and Nani G. Bhowmik, ed., 1992), p442-447.

Preclosure Seismic Hazards and Their Impact on Site

Suitability of Yucca Mountain, Nevada, J. Duane Gibson, (High Level Radioactive Waste Management, High

Level Radioactive Waste Management Program Committee 1992), p115-1158.

Level Radioactive Waste Management Program Committee, 1992, p.1151-1158.
 A Predictive Model of the Currents in Cleveland Bay, Brian King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), 746-756.

p746-758

p746-738. Sensitivity of Flow and Salt Transport to Uncertainties at Open Boundaries: A 3-D Experience, Bernard B. Hsieh and Billy H. Johnson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p720-732.
Slip Velocity and Temperature Jump in Flow over Rough Surface, J. B. Zhang and V. H. Chu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), p564-607.

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p604-607.

SOA: Large Strain Consolidation Predictions, F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243.

A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, Kwang-W. You, Lie-Yauw Oey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p453-465.

Unconfined Granular Materials Thermalized by Fluctuating Horizontal Surfaces, Mark W. Richman and Richard E. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p900-903.

Variational Solutions of the Von Karman Plate Theory Based on a Mixed Formulation, Wan-Lee Yin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p656-659.

Boundary element method

Boundary-element Direct Reanalysis for Continuum Structures, J. H. Kane, B. L. Keshava Kumar and R. H. Gallagher, EM Aug. 92, p1679-1691.

Design of Wave Barriers for Reduction of Horizontal Ground Vibration, Tahmeed M. Al-Hussaini and Shahid Ahmad, GT Apr. 91, p616-636.

Frictionless Contact with BEM Using Quadratic Programming, Srdan Simunović and Sunil Saigal, EM Sept. 92, p1876-1891.

Rocking Impedance of Embedded Strip Foundations in Layered Soil, A. Bharadwaj and S. Ahmad, GT May 92, p796-813.

Stochastic Finite & Boundary Element Simulations, Gau-tam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123.

Stochastic Finite and Boundary Elements, Gautam Dasg-upta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p932-935.

The Superposition Approach to Pile Group Dynamics, H. El-Marsafawi, A. M. Kaynia and M. Novak, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p114-135.

Time Domain Analysis of Dynamically Loaded Single Piles, S. M. Mamoon and P. K. Banerjee, EM Jan. 92, p140-160.

p140-160. Time-Domain Second-Order Wave Diffraction in Three Dimensions, Michael Isaacson and Kwok Fai Cheung, WW Sept./Oct. 92, p496-516. Torsional Radiation Damping of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, p1186-1199. Torsional Stiffness of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, p1168-1185.

Water Wave Generated by a Porous Wavemaker, L. H. Huang, P. C. Hsieh and G. Z. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p336-340.

ed., 1992), p336-340.

Boundary layer
Computation of Turbulent Shear Flow Over SurfaceMounted Obstacle, Jianming He and Charles C. S.
Song, EM Nov. 92, p2282-2297.
Controlling Mechanism of Local Souring, Bijan Dargahi,
HY Oct. 90, p1197-1214.
Flow Field Induced by Sea Waves Over Brick-Pattern
Ripples, G. Vittori, HY Sept. 92, p1241-1259.
Observations on Flow Around Bridge Piers, Ferdous Ahmed and Nallamuthu Rajaratnam, (Hydraulic Engineering: Suring a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nain G.
Bhowmik, ed., 1992), p834-839.
Velocity Distribution in Uniform Sediment-Laden Flow,
Motobiko Umeyama and Franciscus Gerritsen, HY
Feb. 92, p229-245.

undary shee Cohesionless Fine-Sediment Bed Forms in Shallow Flows, Peter A. Mantz, HY May 92, p743-764.

Flows, Feter A. Mantz, HY May 92, p743-764.

Boundary value problems

An Analytical Solution to a Clamped Cylindrical Panel with Anti-Symmetric Angle-Ply Laminations, Humayun R. H. Kabir and J. B. Kennedy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Boundary-Coatinuous Fourier Solution for Clamped Mindlin Plates, Humayun R. H. Kabir and Reaz A. Chaudhuri, EM July 92, p1457-1467.

Highly Accurate Adaptive hp-Methods for Linear Elastostatics, J. Tinsley Oden, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), n628-631.

p628-631.
Inverse Problems in Biomechanics, Utpal Roy and Gautam Ray, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p980-983.
On a Micromechanical Bassis of Stochastic Constitutive Laws, Martin Ostoja-Starzewski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p184-187.

Boundary values

Computation of the Least Eigenvalue on a MemorySharing Multiprocessor Computer, Jenn-Ching Luo,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p754-761.

Anisotropic Hardening Plasticity Model for Sands, Robert Y. Liang and Hann-Ling Shaw, GT June 91, p913-933.

Hypoplastic Model for Sands, J. P. Bardet, EM Sept. 90, p1973-1994.
Numerical Study of Soil Anisotropy, A. Anandarajah, EM Jan. 92, p211-216.

Box beam Box beams
Concrete Box Sections Under Biaxial Bending and Axial
Load, Cengiz Dundar, ST Mar. 90, p860-865.
Formulas for Shear-Lag Effect of T-, and I-, and Box
Beams, Qi-gen Song and Alexander C. Scordelis, ST
May 90, p1306-1318.

ox col

Strength and Efficiency of Wood Box Columns, D. B. Van Dyer, ST Mar. 92, p716-722.

Box girders Instrumenting the 'Y', Carin L. Roberts, John E. Breen and Patrick M. Bachman, CE Nov. 92, p48-51. Braced excavation

Building Response to Excavation-Induced Settlement, Marco D. Boscardin and Edward J. Cording, GT Jan. 89, p1-21.

89, p1-21.

Bracing
Bracing Requirements of Plane Frames, Shyi-Lin Lee and P. K. Basu, ST June 92, p1527-1546.

Deep Cuts and Ground Movements in Chicago Clay, Richard J. Finno, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143.

Full Scale Application of Active Bracing Systems, M. A. Riley, A. M. Reinhorn and T. T. Soong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p816-819.

Stitch Spacing and End Fixity in Seismic-Resistant Boxed Angle Braces, Farhang Asiani and Subhash C. Goel, ST Oct. 92, p2872-2889.

Oct. 92, p2872-2889.
Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.
Theoretical Study of Stability Criteria for X-Bracing Systems, Dong Q. Wang and Arthur P. Boresi, EM July 92, p1357-1369.

Brackish water
Brackish Groundwater Desalting in Southern California:
A Summary of Case Studies, Lee A. Jacobi, Julius Y.
Ma and William R. Everest, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p587-392.

ing: Saving a Threatened Resource—In Search of Solubraking
Controlled Braking on Uneven Roads, Dieter Ammon,
(Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p55-68.
Modeling and Analysis of Doubly Curved Aerobrake
Truss Structures, Gregory Washington and Eric Klang,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p933-944.
A Novel Aerobrake Design for a Mars Lander, John E.
Crawford, Ralph G. Colbert and Manual I. Cruz, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p862-872.
On-Orbit Assembly of Large Space Structures: A Mars
Aerobrake Mock-up Study, Gordon K. F. Lee, Dave
Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p999-1009.
Structural Considerations in the Design of a Mars Mission Aerobrake, John Hairr and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p931-884.
Structural Studies of Two Aerobrake Heatshield Panel
Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p921-932.
Studies Related to Aircraft/Runway Friction Performance, Thomas J. Yager, (International Air Transportation: A New International Airport, Robert E. Boyer, ed.,
1992), p64-71.

Brazil
Application of a Beach Plan Evolution Model in Sergipe.

Application of a Beach Plan Evolution Model in Sergipe, Brazii, Otavio J. Sayao and K. C. Ander Chow, (Coast-al Engineering Practice '92, Steven A. Hughes, ed., 1992), p234-250.

1992, p.234-230.
Application of Results from the Poços de Caldas Project in the Kristallin-I HLW Performance Assessment, I. G. McKinley, W. R. Alexander, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.357-361.

Breaking waves

Effects of Bottom Friction on Wave Breaking Using RCPWAVE Model, Jerome P.-Y. Maa and S.-C. Kim, WW July/Aug. 92, p387-400.

Longshore Sediment Transport Rate at Morro Bay, CA, James M. Kaihatu, Chris Andrassy and Edward F. Thompson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p615-631.

Measured Internal Kinematics for Shoaling Waves with Theoretical Comparisons, M. W. Griffiths, W. J. Easson and C. A. Greated, WW May/June 92, p280-299.

Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-236.

Shoaling and Breaking of Random Wave Trains: Spectral Approaches, James T. Kirby, James M. Kaihatu and Hajime Mase, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p71-74.

Wave Runup on Smooth and Rock Slopes of Coastal

Wave Runup on Smooth and Rock Slopes of Coastal Structures, Jentsje W. van der Meer and Cor-Jan M. Stam, WW Sept./Oct. 92, p534-550.

41

Breakwaters
The 1984 Major Rehab of the Muskegon Harbor, MI
South Breakwater: An Extreme Example of Misguided
Design of a Stone Structure, Charles N. Johnson, (Durability of Stone for Rubble Mound Breakwaters, Orville
T. Magoon, ed. and William F. Baird, ed., 1992),
Alternative State of the Muskey State of the State of the State of the Muskey State of the Muskey

p238-293.
Alternative Study for the Breakwater and Fishing Pier Rehabilitation at Playland Park, Rye, New York, David W. Yang, Michael J. McCarthy, Edward J. Schmeltz, Joseph Bonasia and Ralph Butler, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p632-645.

Participation of Break Plan Englusting Model in Serging

Application of a Beach Plan Evolution Model in Sergipe, Brazil, Otavio J. Sayao and K. C. Ander Chow, (Coast-al Engineering Practice '92, Steven A. Hughes, ed., 1992), p234-250.

1992, p234-290.
Application of Extremely Low Altitude Photogrammetry for Monitoring Coastal Structures, Richard B. Davis and Thomas R. Kendall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p892-897.

Mar./Apr. 92, p207-212.

Bay Ridge, Anne Arundel County, Maryland Offshore Breakwater and Beach Fill Design, Edward T. Fulford and Kenneth M. Usab, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p205-220.
Chesapeake Bay Field Modeling and Monitoring Projects, Wesley E. Coleman, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p21-233.
Design, Construction, and Performance of a Baffled Breakwater, Jonathan W. Lott and Walter E. Hurtienne, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p487-502.
Development of Detached Breakwater Design Criteria Using a Shoreline Response Model, Julie Dean Rosati, Mark B. Gravens and Monica A. Chasten, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p814-859.
Draft Chapter 2—Planning and Design Guidelines for Park Chapter 2—Planning and Design Guidelines for

p814-829.

Praft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwaters, ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Ennio DeCurtis, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Douglas Sethness, Jr., (Ports '92, David Torseth, ed., 1992), p1001-1065 r.), (Ports '92, David Torseth, ed., Funjionnental Effects of Resultent Sec Causerways J. M.

Environmental Effects of Beaufort Sea Causeways, J. M. Colonell, B. J. Gallaway and A. W. Niedoroda, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974.

Experimental Studies for the Port of Bilbao Extension, José R. Iribarren and María J. Martín, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p149-157.

p149-157.
 Field Monitoring of a Modular Detached Breakwater System, Robert M. Sorensen and J. Richard Weggel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p189-204.
 Field Trip—Cleveland East Breakwater Inspection, Thomas J. Bender, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p270-272.
 Flexible Propus Breakwater Keh-Han Wang and Xugui

nam F. Baird, ed., 1992), p270-272. Flexible Porous Breakwater, Keh-Han Wang and Xugui Ren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p224-227. Hydraulic Design of Offshore Breakwater in Sergipe, Brazil, Otavio J. Sayao and Charles P. Fournier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693.

Hydraulic Design of Perforated Breakwaters, M. Fugazza and L. Natale, WW Jan./Feb. 92, p1-14.

and L. Natale, WW Jan/Feb. 92, p1-14.

Impact of Breakwater Removal on Hydrodynamics and Watro Quality in Flushing Bay, New York, Frederick E. Schuepfer, Guy A. Apicella and Les Kloman, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p694-706.

Inner Harbor Wave Conditions due to Breakwater Overtopping, Fredric Raichlen, Jack C. Cox and Jerald D. Ramsden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p425-446.

Laupahoehoe Harbor Planning, Design, & Construction, David A. Lau, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p320-336.

A New Concrete Armor Unit for Breakwaters: The "Beta Block", José Maria Berenguer, Vicente S. Naverac and José Manuel de la Peña, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992, p667-678.

Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1053-1068.

p1055-1068.
An Overview of Segmented Offshore/Headland Breakwater Projects Constructed by the Buffalo District, Thomas Bender, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p170-188.
Quarry Techniques for Dimensional Breakwater Stone, Stephen N. Stehlik, R. D. Knisely and C. L. Kramer, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p170-184. p170-184.

Reflection and Transmission of Water Wave by Porous Breakwater, L. H. Huang and H. I. Chao, WW Sept./ Oct. 92, p437-452.

Oct. 92, p437-452.

Remote Automated Wave and Water Level Monitoring System Deployed at Agat Harbor, Guam, David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p898-907.

Screen Breakwaters, A. N. Williams and W. W. Crull, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p332-335.

Sea Defence System at Herne Bay, England, J. H. de Vroeg, J. van Overeem, A. G. Roberts and M. R. Beck, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1932), p30-103.

etc., 1992), p94-103.

Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, Kevin R. Stank and James W. Knox, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p95-114.

nam F. Baird, ed., 1992), p95-114.

Spin-fin Piles Gain in Application, CE Jan. 92, p12-13.

Slability of Accropode(R) and Comparison with Parallelepipedic Block, Braulio G. Madrigal and José Lozano, (Civil Engineering in the Oceans V, Robert T.

Hudspeth, ed., 1992), p704-717.

Statistical Analysis of Formulas for Breakwater Armor
Layer Design, Kalin Nikolov Koev, WW Mar/Apr. 92,
p213-219.

Trends in Phreatic Surface Motion in Rubble-Mound Breakwaters, Kevin R. Hall, WW Mar/Apr. 91, p179-187.

181.
Value Engineering in Coastal Design, Jack C. Cox, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p935-951.
Wave Barriers: An Environmentally Benign Alternative, Jeffrey F. Gilman and Dennis Nottingham, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p479-486.

79-19-400.
Jave Induced Vortex Near Seashore, Tai-Wen Hsu, Shan-Hwei Ou and Chun-Wei Sun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p466-469.

Brick masoury

Building Response to Excavation-Induced Settlement,

Marco D. Boscardin and Edward J. Cording, GT Jan.

Stress-Strain Curves for Brick Masonry in Biaxial Com-pression, Krishna Naraine and Sachchidanand Sinha, ST June 92, p1451-1461.

ricks

Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.

Bridge abutments
On the Influence of Seismically Induced Residual Forces
on Bridge Abutment Design, Raj Siddharthan and
Mahmoud El-Gamal, (Engineering Mechanics, Lord
D. Lutes, ed. and John M. Niedtwecki, ed., 1992), p51-54.

pepage Influence on Stability of Bridge Abutments, D. J. Hagerty and A. C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

Bridge construction

Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-

Bridge Construction Goes Gently Down the River, CE Nov. 92, p23-26.

Life-Cycle Cost Analysis Doesn't Work for Bridges, David Veshosky and Carl R. Beidleman, CE July 92,

pb.
Method Proposed for Construction of Multispan Cable-Stayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282.
Not Just Talking About the Weather, CE June 92, p11.
Potential Gains Through Welded-Wire Fabric Reinforce-ment, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Potential ISTEA Funds Boost Bridge Conference, CE Aug. 92, p10,12.

Bridge decks

Analysis of Cantilever Decks of Thin-Walled Box Girder Bridges, Shih Toh Chang and Jiang Zhi Gang, ST Sept. 90, p2410-2418.

90, p2410-2418.
Behavior of Isotropic R/C Bridge Decks on Steel Girders, I.-K. Fang, J. Worley, N. H. Burns and R. E. Klingner, ST Mar. 90, p659-678.
Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p252-538.
Deck Modules Speed Work, Cut Bridge Rehab Cost, CE May 92, p10,12.
Flawed Assumptions: Why Bridge Deck Joints Fail Manning Company of the Park Park

Flawed Assumptions: Why Bridge Deck Joints Fail, Mar-tin P. Burke, Jr., CE Nov. 91, p60-62. Ohio Looks to Improve Bridge-Deck Performance, CE

Oct. 92, p11.

Oct. 92, p11.

Optimal Long-Term Scheduling of Bridge Deck Replacement and Rehabilitation, Timothy L. Jacobs, TE Mar/Apr. 92, p312-322.

Overlays on Deck, Paul Tarricone, CE Sept. 92, p42-45.

Performance of Orthotropic Bridge Decks, Ali Touran and Alex Okereke, CF May 91, p134-148.

Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange". John Zachar and Tarun R. Naik, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), pi07-115.

Secondary Stresses in Closed Orthotropic Deck Ribs at Floor Beams, Roman Wolchuk and Alexis Ostapenko, ST Feb. 92, p582-595.

ST Feb. 92, p582-595.
Splice/Development Length Requirements for FRP Grids
Used in the Structural Reinforcement of Concrete,
Edwin R. Schmeckpeper and Charles H. Goodspeed,
(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), p632-644.
Tests of Full-Size Pultruded FRP Grating Reinforced
Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi
and Eric Munley, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White,
ed., 1992), p618-631.

Bridge design

AASHTO Bridge Design System—An Engineering Software with Formal Database Management, Roy A. Imbsen and Toorak Zokaie, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p663-670.

AASHTO Seismic Isolation Design Requirements for Highway Bridges, Ronald L. Mayes, Ian G. Buckle, Trevor E. Kelly and Lindsay R. Jones, ST Jan. 92, Advancing Bridge, Pine Section 1997.

p.284-304.
Advancing Bridge-Pier Scour Engineering, Peggy A. Johnson, El Jan. 91, p48-55.
Aesthetic Design Philosophy Utilized for California State Bridges, James E. Roberts, UP Dec. 92, p138-162.
Are You Ready for Spaghetti (Bridges, That Is)?, CE Sept. 92, p80.

92, p80.

Calibration of Redundancy Factors for Highway Bridges, Michel Ghosn and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p344-347.

Engineers Not Required to Recommend Median Barriers, CE Oct. 92, p28.

Evaluation of Impact Factors for Horizontally Curved Steel Box Bridges, D. R. Schelling, N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221.

Evaluation of System-Reliability Methods for Cable-Stayed Bridge Design, Michel Bruneau, ST Apr. 92, p1106-1120.

Finite Element Analysis and Design of Bridges in a Dis-tributed Computing Environment, C. A. Hudson and M. A. Aussin, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p671-678.

Generation of Examples for Training a Learning Design System, Yoram Reich, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), Childhien for Design of Child

p999-1006.
Guidelines for Design of Cable-Stayed Bridges, ASCE
Committee on Cable-Stayed Bridges, (Man-Chung
Tang, chmn.), 1992, 0-87262-900-7, 7091.
Inductive Learning of Bridge Design Knowledge, Yoram
Reich and Steven J. Fenves, (Knowledge Acquisition in
Civil Engineering, Tomasz Arciszewski, ed. and Lewis
A. Rossman, ed., 1992), p169-189.
Instrumenting the 'Y', Carin L. Roberts, John E. Breen
and Patrick M. Bachman, CE Nov. 92, p48-51.
A Multiple Presence Load Model for Bridges, Robert J.
Heywood, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p579582.

On the Fatigue Loading for Local Components, Akhilesh Chandra Agarwal, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p583-586.

13724, p.383-360. Refined Analysis of Load Distribution Factors for Bridges, M. A. Issa, Huiming Li, M. Arockiasamy, M. Shahawy and M. Issa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.260-263.

ip Behavior of Cable against Saddle in Suspension Bridges, Koei Takena, Michio Sasaki, Kouichi Hata and Kazuo Hasegawa, ST Feb. 92, p377-391.

Advancing Bridge-Pier Scour Engineering, Peggy A. Johnson, El Jan. 91, p48-55.

Assessing Time-Variant Bridge Reliability Due to Pier Scour, Peggy A. Johnson and Bilal M. Ayyub, HY June 92, p887-903.

Behavior of Externally Confined Concrete Columns, M. W. Li, H. Saadatmanesh and M. R. Ehsani, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p677-690.

Loss Accounting Principles With Emphasis on Bridge Failure, Hal Cochrane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1076-1081.

Merging Field & Laboratory Bridge Scour Data, J. Ster-ling Jones, Peggy A. Johnson and Arthur C. Parola, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1100-1105.

ano. vanu G. Bnowmik, ed., 1992), p1100-1105.
Probability of Bridge Failure Due to Pier Scour, P. A. Johnson and B. M. Ayyub, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p690-695.

Reliability-Based Pier Scour Engineering, Peggy A. Johnson, HY Oct. 92, p1344-1358.

son, HY Oct. 92, p1344-1538. Scour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hy-draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

C. Bnowmis, ed., 1992, po4-95.
Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), p70-75.
Update: Bridge Scour, Frank Huber, CE Sept. 91, p62-63.

Bridge foundations

Analytical Studies on the Seismic Response of Lead Rub-ber Base Isolated Bridges, Emmanuel Maragakis, Meh-di Saiidi and Eui-Seng Hwang, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., ics, Loren D. 1992), p67-70.

The Influence of Rectangular Pier Foundation on Local Scour, A. C. Parola, D. A. Schaefer, A. El-Khoury and B. M. Brown, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), pl 32-137.

Risk-Costs for Scour at Unknown Bridge Foundations, G. Kenneth Young, Stuart M. Stein and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111.

G. Bnowmik, ed., 1992), p1100-1111.

Scour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Bridge Inspection
ASCE Members Can Take Bridge Course at Home, CE
Mar. 92, p76.

City to Inspectors: Get Back to Work, CE Oct. 92, p8. Development of Computer Automated Bridge Inspection Process, S. S. Kuo, Thomas E. Davidson and Leonard M. Fiji, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p794-801.

Inventory of Highway Infrastructure Problems Through Bridge Inspection, Enno Koehn and N. A. Barroeta, El Apr. 91, p133-149.

Apr. 31, p13-1-193.

Sour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Bridge Overloading Criteria, Michel Ghosn, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p575-578.

Bridge Testing—A Surprise Every Time, Baidar Bakht and Leslie G. Jaeger, ST May 90, p1370-1383. Experimental Bridge Faces Heavy Loads, CE June 92, p29-30.

High-Strength Concrete Tested in Bridge Girders, CE Sept. 92, p27-28. A Multiple Presence Load Model for Bridges, Robert J. Heywood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p579-

On the Fatigue Loading for Local Components, Akhilesh Chandra Agarwal, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p583-586.

Statistical Evaluation of Truck Overloads, Jamshid Mohammadi and Nadir Shah, TE Sept./Oct. 92, p651-

Truck Loading Data for a Probabilistic Bridge Live Load Model, Dan M. Frangopol, George G. Goble and Nu-rhan Tan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-

Bridge maintenance Advancing Bridge-Pier Scour Engineering, Peggy A. John-son, El Jan. 91, p48-55.

Bridge Rehab is Bad Idea (ltr), Irwin Fruchtman, CE Feb. 92, p35.

Hydraulic Demolition Preserves Historic Bridge, CE Aug. 92, p77.

Modeling Bridge Deterioration with Markov Chains, Mark A. Cesare, Carlos Santamarina, Carl Turkstra and Erik H. Vanmarcke, TE Nov./Dec. 92, p820-833.

Optimal Allocation of Resources in Repair and Mainte-nance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed. 1992), p1-4.

Rehabbing the Rails, Stewart D. Winn, Jr., CE Sept. 92, p54-57.

Safeguarding Steel, Rita Robison, CE Apr. 92, p50-53. Steel Alloy Aids Pennsylvania Bridge, CE Dec. 92, p88.

Triple Coat Protects Marine Bridge Beams, CE Sept. 92, p94.

Bridge tests
Bridge Testing—A Surprise Every Time, Baid
and Leslie G. Jaeger, ST May 90, p1370-1383.

Bridges
Analytical Studies on the Seismic Response of Lead Rubber Base Isolated Bridges, Emmanuel Maragakis, Mehdi Saiidi and Eui-Seng Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), p67-70.
Assessing Time-Variant Bridge Reliability Due to Pirescout, Peggy A. Johnson and Bilal M. Ayyub, HY June 92, p887-903.

92, p887-503.

Bridge Conference Gains in Attendance, Importance (itr), Reidar Bjorhorde, CE Oct. 92, p34.

Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1922, p1094-1099.

BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906-911.

Caltrans to Retrofit Double-Deck Bridges, CE Jan. 92, p14.

p14. p14.
Computer Simulation of River Channel Changes at a Bridge Crossing on a Point Bar, Howard H. Chang, Marshall E. Jennings and Steve Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p76-81.
Contractor Watches Clock on Bridge Rehab, CE Sept. 92,

p20.

contractor watenes clock on Bridge Rehab, CE Sept. 92, p20.

Development of a Limit-State Seismic Code for Bridges, Ian G. Buckle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p164-167.

Effects of Footing Location on Bridge Pier Scour, J. Sterling Jones, Roger T. Kilgore and Mark P. Mistichelli, HY Feb. 92, p280-290.

Evaluating Damage Detection in Bridges, David F. Mazurek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p944-947.

Evaluating Polymer Concrete Bridge Expansion Joints Using Acoustic Emission, M. J. Woodard and S. S. Kuo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p409-412.

An Evaluation of Highway Flood Damage Statistics, Jennifer Rhodes and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1082-1087.

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski Brown, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p691-695.

p691-695. Flexibility by Multireference Impact Testing for Bridge Diagnostics, Madhwesh Raghavendrachar and Ahmet E. Aktan, ST Aug. 92, p2186-2203. Fly-Ash Slurry Island: I. Theoretical and Experimental In-vestigations, Sumio Horiuchi, Masataka Taketsuka, Takuro Odawara and Hiromi Kawasaki, MT May 92, p117-133.

Phy-Ash Slurry Island: II. Construction in Hakucho Ohashi Project, H. Kawasaki, S. Horiuchi, M. Akatsu-ka and S. Sano, MT May 92, p134-152. Historic Bridge Program Gets Preservation Award, NE

Has and S. Saino, M. May 92, p134-152.

Hastoric Bridge Program Gets Preservation Award, NE Aug, 92, p9.

Instrumenting the 'Y', Carin L. Roberts, John E. Breen and Patrick M. Bachman, CE Nov. 92, p48-51.

Investigation of Coastal Conditions at Oregon Inlet, NC for the Replacement of the Herbert C. Bonner Bridge, Jeffrey G. Shelden, John R. Lesnik and M. Anthony Young, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p537-553.

Local Scour at Bridge Abutments, B. W. Melville, HY Apr. 92, p615-631.

Modeling Bridge Deterioration with Markov Chains, Mark A. Cesare, Carlos Santamarina, Carl Turkstra and Erik H. Vanmarcke, TE Nov./Doc. 92, p820-833.

Neural Networks in Dynamic Analysis of Bridges, Stuart S. Chen and Ketan Shah, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1038-1065.

Out with the Old, Thomas B. Terpening and Michael

Out with the Old, Thomas B. Terpening and Michael Irwin, CE Sept. 92, p50-53.

Prestressed Composite Girders. I: Experimental Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2743-2762.

Prestressed Composite Girders. II: Analytical Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 29, 2p763-2783.
Refined Analysis of Load Distribution Factors for Bridges, M. A. Issa, Huiming Li, M. Arockissamy, M. Shahawy and M. Issa, (Engineering Mechanica, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p260-263.
Rehabilitation of Chloride Damaged Concrete, Christopher P. Hodges, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491.
Reliability Consideration in Shakedown Analysis, K. C. Chou and T. V. Galambos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p204-207.
Reliability Model for Bridge Columns under Seismic Loads, Michel Ghosn and Ge Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p168-171.
The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p80-91.
Spatial Variability Effects on the Seismic Response of Models of Bridges, Aspasis Zerva, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p172-175.

Sprayed-Zinc Galvanic Anodes for the Cathodic Protection of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p732-747.

Statistical Evaluation of Truck Overloads, Jamshid Mohammadi and Nadir Shah, TE Sept-Oct. 92, p651-202-202-201.

665.

Survey Predicts Bridge Trends for the 1990s, CE Sept. 92, p12,14.

Temperature Dependent Bridge Movements, Shashi Moorty and Charles W. Roeder, ST Apr. 92, p1090-1105.

Two-Dimensional Hydraulic Analysis of the Owensboro Bridge and Approaches, M. A. Ports, T. G. Turner and D. C. Frochlich, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p.280-286

286. United States Geological Survey Bridge Scour Evaluation Program in Texas, David D. Dunn and Henry R. Hejl, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p82-84. Update: Bridge Scour, Frank Huber, CE Sept. 91, p62-63. Vibration of a Bridge Under a Random Train of Moving Loads, M. Di Paola and G. Ricciardi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p136-139.

Bridges, arch Response of Suspension and Deck Arch Bridges to Spa-tially Varying Ground Motion, Ronald S. Harichan-dran, Ahmad Hawwari and Basheer N. Sweidan, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p264-267.

Bridges, box girder
Aesthetic Design Philosophy Utilized for California State
Bridges, James E. Roberts, UP Dec. 92, p138-162.
Analysis of Cantilever Decks of Thin-Walled Box Girder
Bridges, Shih Toh Chang and Jiang Zhi Gang, ST Sept.
90, p2410-2418.

p0, p2410-2418.
 Czechoslovakian Bridge: A Firsthand Look (ltr), Jarda D. Nehybka, CE July 92, p36.
 Drying and Cracking Effects in Box-Girder Bridge Segment, Zdeněk P. Bazant, Vladimír Křistek and Jan L. Vítek, ST Jan. 92, p305-321.

VIEE, S1 Jan. 92, p505-321.

Evaluation of Impact Factors for Horizontally Curved Steel Box Bridges, D. R. Schelling, N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221.

Prestress Influence on Shear-Lag Effect in Continuous Box-Girder Bridge, Shih Toh Chang, ST Nov. 92, -3112-3121. p3113-3121.

Seattle Swings Again, Rita Robison, CE July 92, p46-49. A Steel Box Girder Bridge—With a Twist, CE Apr. 92,

p16-17.
Thin-Walled Multicell Box-Girder Finite Element, A.
Ghani Razaqpur and Hangang Li, ST Oct. 91, p2953-

Bridges, cable-stayed
Analytical Aerodynamic Investigation of Cable-Stayed
Helgeland Bridge, Imre Kovacs, Holger S. Svensson
and Elljarn Jordet, ST Jan. 92, p147-168.

Pand Surface

Cable-Stayed Bridge Vibration Due to Road Surface Roughness, Ton-Lo Wang and Dongzhou Huang, ST May 92, p1354-1374.

Clear-Span Timber Bridge Completed in Japan, CE Nov. 92, p28.

Computer Analysis of the East Huntington Cable-Stayed Bridge, Hany J. Farran and William Lai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1922, p687-694.

Design Cable-stayed Bridge for Cost Effectiveness and Safety, Jih-Jiang Chyu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p59-62.

Double Diamonds: New Brand for a Texas Bridge, Thomas G. Lovett and Dennis W. Warren, CE Apr. 92, p42-

Evaluation of System-Reliability Methods for Cable-Stayed Bridge Design, Michel Bruneau, ST Apr. 92, p1106-1120.

Fatigue Resistance of Large-Diameter Cable for Cable-Stayed Bridges, Koei Takena, Chitoshi Miki, Hirosuke Shimokawa and Kenji Sakamoto, ST Mar. 92, p701-715.

Generation of Examples for Training a Learning Design System, Yoram Reich, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p999-1006.

p999-1006.
Guidelines for Design of Cable-Stayed Bridges, ASCE
Committee on Cable-Stayed Bridges, (Man-Chung
Tang, chmn.), 1992, 0-87262-900-7, 70pp.
Method Proposed for Construction of Multispan CableStayed Bridges, W. H. Dilger, G. S. Tadros and P.
Giannelia, CO June 92, p273-282.
New Cable-Stayed Bridge Will Span the Mississippi, CE
Feb. 92, p16-18.

Bridges, cantilever

Analysis of Cantilever Decks of Thin-Walled Box Girder Bridges, Shih Toh Chang and Jiang Zhi Gang, ST Sept. 90, p2410-2418.

Bridges, composite

Bridges, composite
Bridge Testing—A Surprise Every Time, Baidar Bakht
and Leslie G. Jaeger, ST May 90, p1370-1383.

Structural Performance of Hardwood-Metal Composite
Beams, Robert H. Kim and Jai B. Kim, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p718-731.

Ultimate Loads of Continuous Composite Bridges, John
B. Kennedy and Mohamed Soliman, ST Sept. 92,
p2610-2623.

And the OCEA Winner for 1992 Is..., NE June 92, p15.
Building Better Bridges: Concrete Vs. Steel, Clifford L.
Freyermuth and Andy Johnson, CE July 92, p66-71.

Cost Comparison of Timber, Steel, and Prestressed Con-crete Bridges, R. A. Behr, E. J. Cundy and C. H. Good-speed, ST Dec. 90, p3448-3457.

Evaluation of Concrete Bridges by Impact-Echo, Al Ghor-banpoor, Y. P. Virmani and G. R. Fatemi, (Nondestru-tive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p82-93.

Nondestructive and Destructive Testing of a Three Span Skewed R. C. Slab Bridge, R. A. Miller, A. E. Aktan and B. M. Shahrooz, (Nondestructive Testing of Con-crete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p150-161.

PCA Seeks Concrete Bridge Candidates, CE Aug. 92, p8.
Prestressed-Concrete Railway-Bridge Live-Load Strains,
John F. Muller and Peter F. Dux, ST Feb. 92, p359376.

Shear Resistance Models for Concrete Bridges, Ahmed S. Yamani and Andrzej S. Nowak, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p809-811.

Bridges, continuo

Impact Analysis of Continuous Multigirder Bridges due to Moving Vehicles, Dongzhou Huang, Ton-Lo Wang and Mohsen Shahawy, ST Dec. 92, p3427-3443.

Live-Load Moments for Continuous Skew Bridges, Mohammad A. Khaleel and Rafik Y. Itani, ST Sept. 90. n2361-2373

Bridges, girder

Bayesian Reliability Updating of Existing Steel Girder Bridges, Sami W. Tabsh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p55-58.

Behavior of Concrete-Graphite/Epoxy Sections in Composite Bridge Girders, F. Gordaninejad, M. Saiidi and N. Webbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709.

Dynamic Response of Multigirder Bridges, Ton-Lo Wang, Dongzhou Huang and Mohsen Shahawy, ST Aug. 92, p2222-2238.

Free Vibration Analysis of Curved Thin-Walled Girder Bridges, Chang-Huan Kou, Steven E. Benzley, Jian-Yuan Huang and D. Allan Firmage, ST Oct. 92, p2890-2910.

p.209-2910.

Impact Analysis of Continuous Multigirder Bridges due to Moving Vehicles, Dongzhou Huang, Ton-Lo Wang and Mohsen Shahawy, ST Dee. 92, p.3427-3443.

Optimum Design of Composite Hybrid Plate Girders, Balaur S. Dhillion and Chen-Hsing Kuo, ST July 91, p2083-2098.

Probabilistic Analysis of Post-Tensioned Steel Girder Bridges, Sami W. Tabsh and Jack R. Kayser, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p13-16.

Residual Deformation Analysis for Inelastic Bridge Rat-ing, Burl E. Dishongh and Theodore V. Galambos, ST June 92, p1494-1508.

Shakedown Limit State of Compact Steel Girder Bridges, M. G. Barker and T. V. Galambos, ST Apr. 92, p986-998.

Ultimate Load Test of Slab-on-Girder Bridge, Baidar Bakht and Lestie G. Jaeger, ST June 92, p1608-1624. Wheel Load Distribution in I-Girder Highway Bridges, Kassim M. Tarhini and Gerald R. Frederick, ST May

92, p1285-1294.

Bridges, highway

AASHTO Bridge Design System—An Engineering Software with Formal Database Management, Roy A.
Imbsen and Toorak Zokaie, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p663-670.

ASHTO Seismic Isolation Design Requirements for Highway Bridges, Ronald L. Mayes, Ian G. Buckle, Trevor E. Kelly and Lindsay R. Jones, ST Jan. 92, p284-304.

Addressing Bridge Scour When Funding Falls Short, John N. Paine, Robert J. Leedy, Jr. and James N. Wigfield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p204-209.

Bridge Overtoading Criteria, Michel Ghosn, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p575-578.

Calibration of Redundancy Factors for Highway Bridges, Michel Ghosn and Fred Moses, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p344-347.

Computer Modeling Analysis for Highway Steel Bridge Vibration, Ton-Lo Wang, Mohsen Shahawy and Dong-zhou Huang, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p679-686.

Evaluation of Seismic Vulnerability of Highway Bridges in the Eastern United States, J. B. Mander, F. D. Panthaki and M. T. Chaudhary, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86.

Fatigue Strength of Deteriorated Steel Highway Bridges, Patrick D. Zuraski and John E. Johnson, ST Oct. 90, p2671-2690.

Geomorphic and Hydraulic Factors Affecting Stream Sta-bility at New York Thruway Bridges, Sufian A. Khondker, Keith E. Giles, Carl J. Montana and Mark A. Hixson, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p912-918.

A GIS-Based Regional Risk Approach for Bridges Subjected to Earthquakes, Seong H. Kim, Michael P. Gaus, George Lee and K. C. Chang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p460-467.

am, bally J. Goodino, et and Jeth K. Wright, ed., 1992), p460-467.

Live Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nassif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

Magnitude of the Scour Evaluation Program, Lawrence J. Harrison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1067-1071.

Merging Field & Laboratory Bridge Scour Data, J. Sterling Jones, Peggy A. Johnson and Arthur C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1100-1105.

A Multiple Presence Load Model for Bridges, Robert J. Heywood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p579-582.

582

Non-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 121-1128.

1992], pl.121-1128.
Numerical and Analytical Description of Highway Surface Roughness, Ton-Lo Wang, Mohsen Shahawy and Dongzhou Huang, (Compating in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p309-316.

On the Fatigue Loading for Local Components, Akhilesh Chandra Agarwal, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p583-586.

1992), p583-586.

Scour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hydraulic Engineering, Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Status of Scour Instrumentation Development, Roy Trent and Ian Friedland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1088-1093.

Steel Alloy Aids Pensytvania Bridge, CF Dec. 92, p88

p1088-1093.
Steel Alloy Aids Pennsylvania Bridge, CE Dec. 92, p88.
Structural Performance of Hardwood-Metal Composite
Beams, Robert H. Kim and Jai B. Kim, (Materials: Per-formance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p718-731.

Thomas D. White, ed., 1992), p718-731.

Structural Reliability and Proof Testing for Highway Bridges, Gongkang Fu and Jianguo Tang. (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p348-351.

Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p70-75.

Truck Loading Data for a Probabilistic Bridge Live Load Model, Dan M. Frangopol, George G. Goble and Nurhann Tan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-343.

343.

Vibration Control of Highway Bridge Under Earthquakes, Zhikun Hou and Gongkang Fu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p176-179.

Wheel Load Distribution in I-Girder Highway Bridges, Kassim M. Tarhini and Gerald R. Frederick, ST May 92, p1285-1294.

Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771.

Bridges, long span Finite Element-Based Flutter Analysis of Cable-Suspended Bridges, Ahmad Namini, Pedro Albrecht and Harold Bosch, ST June 92, p1509-1526.

Bridges, plers
Advancing Bridge-Pier Scour Engineering, Peggy A. Johnson, El Jan. 91, p48-55.

idge Pier Scour with Debris Accumulation, Bruce W. Melville and D. M. Dongol, HY Sept. 92, p1306-1310.

Design of Bridge Pier Pile Foundations for Ship Impact, Bogdan O. Kuzmanovic and Manuel R. Sanchez, ST Aug. 92, p2151-2167.

Ice Loads on Vertical Bridge Pier at Two Different Model Scales, F. T. Christensen and P. Klinting, CR Sept. 92,

The Influence of Rectangular Pier Foundation on Local Scour, A. C. Parola, D. A. Schaefer, A. El-Khoury and B. M. Brown, [Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p132-137.

nings, ed. and Nani G. Bhowmik, ed., 1992, p. 132-137.
Observations on Flow Around Bridge Piers, Ferdous Ahmed and Nallamuthu Rajaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p. 834-839.
Beachability of Bridge Feither Drug to Piers Cours B. A.

Probability of Bridge Failure Due to Pier Scour, P. A. Johnson and B. M. Ayyub, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p690-695.
Reliability-Based Pier Scour Engineering, Peggy A. Johnson, HY Oct. 92, p1344-1358.

Scour Protection at Bridge Piers, Yee-Meng Chiew, HY Sept. 92, p1260-1269.

Seppage Effects on Bridge Pier Scour, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p919-924.

Study of Time-Dependent Local Scour Around Bridge Piers, A. Melih Yanmaz and H. Doğan Altınbilek, HY Oct. 91, p1247-1268.

Bridges, railroad

A Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (Frobabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p320-323.

Prestressed-Concrete Railway-Bridge Live-Load Strains, John F. Muller and Peter F. Dux, ST Feb. 92, p359-

Rehabbing the Rails, Stewart D. Winn, Jr., CE Sept. 92, p54-57.

Span Swap a Success, CE Nov. 92, p13. Study Under Way on Railroad-Bridge Fatigue, CE Nov. 92, p19,21.

92, p19,21.

Bridges, spans
Bridge Evaluation for Multipresence of Vehicles, Baidar
Bakht and Leslie G. Jaeger, ST Mar. 90, p603-618.
Comparison of Wind Cross-Spectral Data with Models,
N. P. Jones, A. Jain and R. H. Scanlan, (Probabilistic
Mechanics and Structural and Geotechnical Reliability,
Y. K. Lin, ed., 1992), p288-291.

A Multiple Presence Load Model for Bridges, Robert J.
Heywood, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p579582.

Probabilistic Description of Buffeting Response of Long-Span Bridges, Friedrich J. Wall and Christian G. Buch-er, EM Dec. 92, p2401-2420.

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441.

Wind Cross-Spectrum Effects on Long-Span Bridges, N. P. Jones, A. Jain and R. H. Scanlan, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p63-66.

Bridges, steel
Bayesian Reliability Updating of Existing Steel Girder
Bridges, Sami W. Tabsh, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p55-58.

1992), p55-58.

Building Better Bridges: Concrete Vs. Steel, Clifford L. Freyermuth and Andy Johnson, CE July 92, p66-71.

Computer Modeling Analysis for Highway Steel Bridge Vibration, Ton-Lo Wang, Mohsen Shahawy and Dong-zhou Huang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p679-686.

Cost Comparison of Timber, Steel, and Prestressed Concrete Bridges, R. A. Behr, E. J. Cundy and C. H. Goodspeed, ST Dec. 90, p3448-3457.

Fatigue Strength of Deteriorated Steel Highway Bridges, Patrick D. Zuraski and John E. Johnson, ST Oct. 90, p2671-2690.

p2671-2690.

Fatigue Strength of Riveted Bridge Members, John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981.

p2906-2981.
Low-Cost Computer Techniques for Steel Truss Bridge Rehabilitation and Ratings, Robert H. Kim and Jai B. Kim, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p786-793.
A New Look at Galvanized Bridges, Rita Robison, CE July 91, p52-55.
Probabilistic Analysis of Post-Tensioned Steel Girdge.

July 91, p52-55.
Probabilistic Analysis of Post-Tensioned Steel Girder Bridges, Sami W. Tabsh and Jack R. Kayser, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p13-16.
Realistic Specifications for Steel Bridge Painting, Luh-Maan Chang and Machine Hsie, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p29-310.
Safeguarding Steel, Rita Robison, CE Apr. 92, p50-53.

Sateguarding steet, Rua Robots in Repair and Mainte-nance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4. Probabilistic Evaluation of Redundancy of Bridge Struc-tures, Robert W. Kritzler and Jamshid Mohammadi, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p156-159.

Bridges, suspension Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129.

129.
Response of Suspension and Deck Arch Bridges to Spatially Varying Ground Motion, Ronald S. Harichandran, Ahmad Hawwari and Basheer N. Sweidan, (Probabilistic Mechanics and Structural and Geolechnical Reliability, Y. K. Lin, ed., 1992), p264-267.
Slip Behavior of Cable against Saddle in Suspension Bridges, Koei Takena, Michio Sasaki, Kouichi Hata and Kazuo Hasegawa, ST Feb. 92, p377-391.
Wire Recovery Length in Suspension Bridge Cable, Mohammed Raoof and Yu Ping Huang, ST Dec. 92, p325-3267.

p3255-3267.

Bridges, truss
Bridge Barges Into New York, CE May 92, p18-19.
Bridge Testing—A Surprise Every Time, Baidar Bakht
and Leslie G. Jaeger, ST May 90, p1370-1383.

Low-Cost Computer Techniques for Steel Truss Bridge
Rehabilitation and Ratings, Robert H. Kim and Jai B.
Kim, (Computing in Civil Engineering and Geographic
Information Systems Symposium, Barry J. Goodno, ed.
and Jeff R. Wright, ed., 1992), p786-793.

Bridges, wooden
Cheering Up the Lumberjacks, CE Jan. 92, p11.
Cost Comparison of Timber, Steel, and Prestressed Concrete Bridges, R. A. Behr, E. J. Cundy and C. H. Goodspeed, ST Dec. 90, p3448-3457.
Prestress Level in Stress-Laminated Timber Bridges, Edward F. Sarisley and Michael L. Accorsi, ST Nov. 90, p3003-3019.

Rehab of Kentucky Covered Bridge Gets Boost from ASCE Members, CE Sept. 92, p77-78.

Brines
Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, E. Smailos and R. Köster, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1676-1680.
Solubility of Uranyl in Brine, Hiromichi Yamazaki, Vassilios Symeopoulos, Bo Lagerman and Gregory R. Choppin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1607-1611.

Brittle failure

Britte failure

Dugdale Model Applied to Crack Interactions, K. Shah,

H. Stolarski and J. F. Labuz, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), 9498-501.

Random Initial Heterogeneity and Degradation in Brittle
Materials, X. Yuan, F. F. Tang and G. Frantziskonis,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p616-619.

Two-Dimensional Statistical Micromechanical Models for Microcracked Brittle Solids, K. H. Tseng and J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p361-364.

Direct Tensile Test: Stability and Bifurcation, Zdeněk P. Bažant and Luigi Cedolin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 9357-360.

Brittlen

Brittleness
Compression Failure of Quasibrittle Material: Nonlocal
Microplane Model, Zdeněk P. Bažant and Joško
Ožbolt, EM Mar. 92, p540-556.

Ozbolt, EM mar. 72, p340-306. Effect of Micro-parameters on the Macroscopic Behaviour of Ductile Fiber Reinforced Brittle Matrix Composites, Christopher K. Y. Leung and Jeffrey Chi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p744-747. Safety and Service Life of Equipment Designed for Cold Climate Operation, V. F. Larionov, CR Sept. 92,

Softening and Snap-Through Behavior of Reinforced Elements, C. Bosco and A. Carpinteri, EM Aug. 92, p1564-1577.

Broad-crested weirs

Broad-Crested Weir Application on 15,000-Acre Farm, S.
W. Styles, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p300-304.

Destruction of Stratification By Bubble Plume, W. D. Baines and A. M. Leitch, HY Apr. 92, p559-577.

Axisymmetric Buckling of Pressure-Loaded Spherical Caps, Paulo B. Gonçalves and James G. A. Croll, ST Apr. 92, p970-985.

Apr. 92, p970-985.
Beam-Column Behavior of Fabricated Steel Tubular Members, H. G. L. Prion and P. C. Birkemoe, ST May 92, p1213-1232.
Bin-Wall Failure Caused by Eccentric Discharge of Free-Flowing Grain, R. A. Bucklin, S. A. Thompson and I. J. Ross, ST Nov. 90, p3175-3190.
Buckle Propagation in Submarine Pipelines, G. D. Hahn, M. She and J. F. Carney, III., EM Nov. 92, p2191-2206.
Buckling Analysis of Structures Composed of Tapered

M. She and J. F. Carney, III., EM Nov. 92, p2191-2206.
Buckling Analysis of Structures Composed of Tapered
Members, Siu Lai Chan, ST July 90, p1893-1906.
Buckling of Columns of Variable Flexural Rigidity, A.
Siginer, EM Mar. 92, p640-643.
Buckling of Pressurized Axisymmetrically Imperfect Cylinders Under Axial Loads, Jin-Guang Teng and J. Michael Rotter, EM Feb. 92, p229-247.
Buckling of Stew Plates and Corner Condition for Simply
Supported Edges, C. M. Wang, K. M. Liew and W. A.
M. Alwis, EM Apr. 92, p651-662.
Buckling of Suspended Cambered Girders, Walter L.
Peart, Edward J. Rhomberg and Ray W. James, ST
Feb. 92, p505-528.
Classical Buckling Load of Spherical Domes Under Uni-

Classical Buckling Load of Spherical Domes Under Uniform Pressure, Haruo Kunieda, EM Aug. 92, p1513-

Column Design in Steel Frames under Gravity Loads, Oscar de Buen, ST Oct. 92, p2928-2935.

Oscar de Buen, ST Oct. 92, p2928-2935.
Compression Tests of Cold-Formed Steel Columns, C. C. Weng and Teoman Petoz, ST May 90, p1230-1246.
Critical Buckling Load Statistics of an Uncertain Column, Garrett D. Jeong, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p563-566.
Critical Review of Thin-Plate Stability Equations, John Platt, Gwynne Davies and Cyril Snell, EM Mar. 92, p481-495.

Crushing Response of Energy Absorbing Composite Structure, Gary L. Farley, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p876-879.

Design Codes for Lunar Structures, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl-12.

Design of a Support and Foundation for a Large Lunar Optical Telescope, Koon Meng Chua, Stewart W. Johnson and R. Sahu, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1952-1963.

Design/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, J. M. Sloss, I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137. Dimensional Analysis of Buckling of Stiffened Composite Shells, B. Moradi and I. D. Parsons, EM Mar. 92, p557-574.

Distortional Buckling Solutions for Continuous Composite Beams, Mark Andrew Bradford and Zhi Gao, ST Jan. 92, p73-89.

Dynamic Elastic-Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. 92, p2005-2016.

92, p.2003-2016.

Fiffect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p.1796-1814.

Effective Strength of 'Square-and-Diagnonal' Double-Layer Grid, Toshitsugu Saka and Yoshiya Taniguchi, ST Jan. 92, p.32-72.

Elastic Buckling Coefficients for Long, Unstiffened Plates, Julie Mark Cohen, EM Dec. 92, p.2491-2496.

Flatic Buckling of Incomplete Composite Plates, Koichi Sato, EM Jan. 92, p1-19. Elastic Buckling of Rectangular Plates with Curved Inter-nal Supports, K. M. Liew and C. M. Wang, ST June 92, p1480-1493.

Elastic Stability of Heavy Rotating Columns, C. M. Wang, EM Jan. 90, p234-239. Energy Equation for Beam Lateral Buckling, Yong Lin Pi, N. S. Trahair and S. Rajasekaran, ST June 92, p1462-1479.

Experimental Performance of Long Links in Eccentrically Braced Frames, M. D. Engelhardt and E. P. Popov, ST Nov. 92, p3067-3088.

Nov. 94, p.304-5086.
Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p912-915.
Frame Buckling Analysis with Full Consideration of Joint

1992), p912-915.

Frame Buckling Analysis with Full Consideration of Joint Compatibilities, Yeong-Bin Yang and Shyh-Rong Kuo, EM May 92, p871-889.

Full Scale Tests on Concentrically Loaded Fiber-Reinforced Pultruded Columns, D. W. Scott, S. J. Yoon and A. Zureick, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576.

The Generalized Brazier Problem for Orthotropic Straight Tubes of Finite Length, C. W. Bert and A. Libai, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p872-875.

Inelastic Amplification Factor for Design of Steel Beam-Columns, 1. S. Sohal and N. A. Syed, ST July 92, p1822-1839.

Columns, I. p1822-1839.

p1822-1839.
Investigation of Parametrically-Induced Excitation in Concrete Columns, Nader Ghafoori and Kambiz Farhang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1051-1054.
Load Shortening in Plastic Buckling of Cylinders, Marwan El-Bkaily and Ralf Peek, EM Sept. 92, p1892-1006.

1906.

1996.

Local and Interaction Buckling of Polygonal Section Steel Columns, Yasuhiro Migita, Tetsuhiko Aoki and Yuhshi Fukumoto, ST Oct. 92, p2659-2676.

Local Buckling of Tubes in Elastic Continuum, James A. Cheney, EM Jan. 91, p205-216.

Locally Buckled Plastic Hinge Behavior Under Monotonic and Cyclic Loading Condition, Eun-Taik Lee and G. C. Lee, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.

Manufactured Wood Joists—Noncollapse Failure, Theodore G. Padgett, Jr., CF Feb. 92, p58-64.

Mechanics of Shape Optimization in Plate Buckling, Mahesh D. Pandey and Archibald N. Sherbourne, EM June 92, p1249-1266.

New Stability Equation for Columns in Braced Frames,

New Stability Equation for Columns in Braced Frames, Rail Goncalves S., ST July 92, p1853-1870. Nonlinear Cyclic Behavior of Reinforcing Bars Including Buckling, Giorgio Monti and Camillo Nuti, ST Dec. Optimal Process of

Optimal Design for Plate Buckling, W. R. Spillers and Robert Levy, ST Mar. 90, p850-858. Pipe Soil Stiffness Ratio Effect on Flexible Pipe Buckling Threshold, Kenneth K. Kienow and Robert C. Prevost, TE Mar./Apr. 89, p112-129.

Postbuckling Response Simulations of Laminated Aniso-tropic Panels, Ahmed K. Noor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Prebuckling Deflections and Lateral Buckling. I: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Appli-cations, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2967-2985.

Predicting the Performance Limits of Soil-Culvert Sys-tems, Yahia E. -A. Mohamedzein, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911.

Response Variability of Structures Subjected to Bifurca-tion Buckling, G. V. Palassopoulos, EM June 92,

p1164-1183

Schifflerized Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1920-1936.

Second-Order Inelastic Analysis Methods for Steel-Frame Design, W. S. King, D. W. White and W. F. Chen, ST Feb. 92, p408-428.

Short-Term Behavior of Pultruded Fiber-Reinforced Plastic Frame, Ayman S. Mosallam and Lawrence C. Bank, ST July 92, p1937-1954.

Sank, S1 July 92, p1937-1994.
Square and Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Mar. 92, p648-668.
Stability of Beams in Eccentrically Braced Frames, M. D. Engelhardt, K. C. Tsai and E. P. Popov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1043-1046.
Stabilities of Builton Columns, Ale Giologic Editoris, Edit Inco 91.

Stability of Built-up Columns, Atle Gjelsvik, EM June 91, p1331-1345.

Stability of Frames with Grade Beam and Soil Interac-tion, George Lin, EM Jan. 92, p125-139.

stiffness Matrix for Nonlinear Analysis of Thin-Walled Frames, Aura Conci, EM Sept. 92, p1859-1875. Stitch Spacing and End Fixity in Seismic-Resistant Boxed Angle Braces, Farhang Aslani and Subhash C. Goel, ST Oct. 92, p2872-2889.

Strength and Efficiency of Wood Box Columns, D. B. Van Dyer, ST Mar. 92, p716-722.

Study on Maximum Strength of Cold-Formed Steel Col-umns, C. C. Weng and C. P. Lin, ST Jan. 92, p128-146. Supermarket Roof Collapse in Burnaby, British Colum-bia, Canada, C. Peter Jones and N. D. Nathan, CF Aug. 90, p142-160.

20, p142-100.

Tests of Cold-Formed Channels with Local and Distortional Buckling. Young B. Kwon and Gregory J. Hancock, ST July 92, p.1786-1803.

Theoretical Study of Stability Criteria for X-Bracing Systems, Dong Q. Wang and Arthur P. Boresi, EM July 92, p1357-1364.

Thermomechanical Buckling of Multilayered Composite Plates, Ahmed K. Noor and Jeanne M. Peters, EM Feb. 92, p351-366.

Inter-Dimensional Solutions for Thermal Buckling of Multilayered Anisotropic Plates, Ahmed K. Noor and W. Scott Burton, EM Apr. 92, p683-701. T-Joints in Rectangular Hollow Sections Subject to Com-bined Actions, Xiao-Ling Zhao and Gregory J. Han-cock, ST Aug. 91, p2258-2277. Use of Engineering Strain and Trefftz Theory in Buckling of Columns, C. M. Wang and W. A. M. Alwis, EM Oct. 92, p2135-2140. Three-Dimensional Solutions for Thermal Buckling of

Budgeting
The Design of the Airside Concourses, James M. Suchiro,
Edward K. McCagg and J. M. Seracuse, (International
Air Transportation: A New International Airport,
Robert E. Boyer, ed., 1992), p207-26.

Budgeting for FAA Facilities and Equip-

Planning and Budgeting for FAA Facilities and Equipment, James D. Bishop, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p.239-243.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175. Phased Assembly of a European Space Station, David A. Nixon and Robin C. Huttenbach, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

p850-861.

Buffeting
Probabilistic Description of Buffeting Response of LongSpan Bridges, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2401-2420.

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441.

Building codes
Design and Construction Considerations for Lunar Outpost, H. Benaroya and M. Ettouney, AS July 92, p261-

273. Earthquakes: A New Look at Cracked Masonry, Randolph Langenbach, CE Nov. 92, p56-58. Moisture Content and Reliability-Based Design for Wood Members, David V. Rosowsky and Kenneth J. Fridley, ST Dec. 92, p3466-3472. New Seismic Code Has Widespread Implications, CE

Nov. 92, p22.

Proposed Seismic Design Method for Piers and Wharves, Robert E. Harn and Bankim C. Mallick, (Ports '92, David Torseth, ed., 1992), p403-417.

Extra Lorsetta, ed., 1992), p403-417.
Retrofitting a Landmark, David L. Houghton, CE Feb. 92, p55-57.
Roof-Snow Load for Seismic-Design Calculations, Michael J. O'Rourke and Robert S. Speck, Jr., ST Sept. 92, p2338-2350.

Seismic Panel Zone Design Effect on Elastic Story Drift in Steel Frames, Keh-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.

Wind Pressures on Buildings with Mullions, Theodor Stathopoulos and Xiwu Zhu, ST Aug. 90, p2272-2291.

A Case of the Shakes, Anthony C. Webster and Matthys P. Levy, CE Feb. 92, p58-60.

Compendium of Design Office Problems, Committee on Design of Steel Building Structures of the Committee on Metals, Structural Division, ST Dec. 92, p3444-

Customer Requirements in Industrialized Housing, Robert L. Armacost, Paul J. Componation, Michael A. Mullens and William W. Swart, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p48-57.

p48-57.

Externalizing Project-Specific Knowledge in Structural Design, Taufiq Rafiq and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p386-393.

Formulation of a Knowledge-Base for Building Design Simulation, Claude Bédard and Mathi Ravi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1129-1138.

Green Architecture: Designing an Ecologically Sound

Green Architecture: Designing an Ecologically Sound Dwelling, Reinhard Kanuka-Fuchs, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

Inductive Learning of Wind Bracing Design for Tall Buildings, Mohamad Mustafa and Tomasz Ar-ciszewski, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p190-203.

Limit-State Interactions in Reliability-Based Design for Wood Structures, David Rosowsky and Bruce Ellingwood, ST Mar. 92, p813-827.

Overview of Existing Lunar Base Structural Concepts, Task Committee on Lunar Base Structures, AS Apr. 92, p159-174.

pt)3-174.

Performance Specifications for the Design and Manufacture of Energy Efficient Housing in the 21st Century, Ronald Kellett, Mark DeKay, Brook Muller, Donald Peting and G. Z. Brown, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p101-110.

Seismic Response of R/C Frames with Irregular Profiles, Sharon L. Wood, ST Feb. 92, p545-566.

3D Analyses of Complex Buildings on Micros, Istvan Kadar and Ricardo A. A. Todeschini, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p551-557.

3D Inelastic Dynamic Analysis of RC Structures, Roy F. Lobo, Sashi K. Kunnath and Andrei M. Reinhorn, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, 1905-912.
Anatomy of the Loma Prieta Earthquake Records of Two Steel Buildings Using MIMO System Identification, Y. Li and S. T. Mau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p689-692.

Applying Lessons from Extreme Environments to Solve Problems on Earth and in Space, Larry Bell, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p240-248.

Building Response to Excavation-Induced Settlement, Marco D. Boscardin and Edward J. Cording, GT Jan.

89, p1-21. Canadian Lab Gets Under Building Skins, CE Oct. 92,

Classifying Process Control Information, Victor E. Sanvi-do and John Messner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p340-347.

p340-547.
Comments on L'Ambiance Plaza Lifting Collar/
Shearheads, William McGuire, CF May 92, p78-85.
Computation of Wind Pressures on L-Shaped Buildings,
Theodore Stathopoulos and Yongsheng Zhou, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p349-352.

Computed Versus Observed Seismic Response and Damage of Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1804-1821.
Concept Evaluation Methodology for Extraterrestrial Habitats, Richard M. Drake and Philip J. Richter, AS July 92, p282-296

92, p282-296.

Construction and Development of a Human Base on Mars, Owen Gwynne, Yoji Ishikawa, Yukinobu Yamamoto, Hisateru Uyeda and Thomas Bongiovi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p89-99.

The Design of a Permanent Lunar Research Station, James R. Thomas, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212.

Earthquakev: A New Look at Cracked Masonry, Ran-Earthquakev: A New Look at Cracked Masonry, Ran-

ett. and Russell J. Miller, ett., 1992), p.201-212. Earthquakes: A New Look at Cracked Masonry, Ran-dolph Langenbach, CE Nov. 92, p56-58. Effectiveness of Seismic Strengthening Techniques for Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1884-1902.

Engineering Pre-engineered Buildings, Alexander Newman, CE Sept. 92, p58-61.

Experimental Study of Sliding Isolated Structures with Uplift Restraint, Satish Nagarajaiah, Andrei M. Reinhorn and Michalakis C. Constantinou, ST June 92, p1666-1682.

92, p1666-1682.
Facility Management System for Buildings, Edgar Samuel Neely, Jr. and Robert Neathammer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p129-136.
The Feasbility of Using Solar Optics for Lunar Base Lighting, Kyle Williams and David Eijadi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p260-275.
Free Vibration Analysis of Asymmetric Buildings, Sean

Saden, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p260-275.

Free Vibration Analysis of Asymmetric Buildings, Sean Wilkinson and David Thambiratnam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p461-465.

Fuzzy Measures in the Knowledge Based Diagnosis of Seismic Vulnerability of Masonry Buildings, Alberto Bernardini, Roberto Gori and Claudio Modena, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28.

Human Habitat Design for the Space Exploration Initiative, Robert Boyd, Scott Geels, Benton C. Clark and Carolyn Cooley, (Engineering, Construction, and Operations in Space III), Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p25-33.

Implementing Uncertainty Treatment in Al Development Environment, Fabio Casciati and Debbie Liu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p17-20.

Inflatable Structures of Non-Circular Cross Section, Eric E. Matsumoto, Shayan Pazaragadi and Philip J. Richter (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 47-158.

Influence of ADAS Element Parameters on Building Seismic Response, Chuan Xia and Robert D. Hanson, ST July 92, p1903-1918.

INFO: An Information Framework for Facility Opera-tors, James P. Beckett and Victor E. Sanvido, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p57-64.

Investigation of L'Ambiance Plaza Building Collapse, Daniel A. Cuoco, David B. Peraza and Thomas Z. Scarangello, CF Nov. 92, p211-231.

Scatangeno, C.F. 1907. 22, pp. 11-231.
Knowledge Acquisition for Postearthquake Usability Decisions, Zahra-El-Hayat Tazir, Tommaso Pagnoni and Carlo Gavarini, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p147-168.

Large-Displacement Effects on Dynamic Response of Eccentric Buildings, Lidia La Mendola and Maurizio Papia, EM May 91, p954-973.

Masonry as a Structural Material, Daniel P. Abrams, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p116-129.

Mining for Building Expansion, Richard M. Croswell, Robin B. Dill and John Booth, CE Dec. 92, p48-51.

Nonlines Dynamic Analysis of RC Structures with Pre-cast Cladding Using GT-IDARC, Loai El-Gazairly, Barry Goodno and James Craig. (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 9896-904.

A Probabilistic Regional Damage Estimation Model for Earthquake Occurrences, Dimitris Rentzis, Anne S. Kiremidjian and Craig Howard, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24.

Reliability of Controlled Structures Subject to Real Parameter Uncertainties, B. F. Spencer, Jr., C. Montemagno, M. K. Sain and P. M. Sain, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p369-372.

Site-Dependence of Spatial Coherency, Norman Abra-hamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p260-263.

Stochastic Critical Excitations, Mukund Srinivasan, Ross Corotis and Bruce Ellingwood, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391.

Wind Pressures on Buildings with Mullions, Theodore Stathopoulos and Xiwu Zhu, ST Aug. 90, p2272-2291.

## **Buildings**, botels

Traffic Impact Studies for Marriott Corporation Interna-tional Headquarters, S. Sabanayagam and Edward Y. Papazian, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p148-153.

Colgate Palmolive Transportation Impact Case Study, Martin J. Wells and Jay S. Bockisch, (Site Impact Traf-fic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p154-158.

## **Buildings**, office

Compendium of Design Office Problems, Committee on Design of Steel Building Structures of the Committee on Metals, Structural Division, ST Dec. 92, p3444-

Traffic Impact Studies for Marriott Corporation Interna-tional Headquarters, S. Sabanayagam and Edward Y. Papazian, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p148-153.

Ultimate Air Rights, Jeffrey Smilow, CE Nov. 91, p38-41.

Building Materials Have Nine Lives, CE July 92, p11.

CADD Utilization in Residential Construction: From Subdivision Design to Dwelling Unit, M. G. Syal, C. McIntyre and J. H. Willenbrock, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p207-213.

Colgate Palmolive Transportation Impact Case Study, Martin J. Wells and Jay S. Bockisch, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p134-158.

Concrete Deterioration, East Los Angeles County Area:

Paaswell, ed., Nagui Rouphail, ed. and T. C. Sularia, ed., 1992), p154-158. Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29. Construction on Wisconsin's Lake Michigan Coast, J. Philip Keillor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p762-778.
Defining Traffic Impacts of Redevelopment, Peter M. Zabierek, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p195-199.
Integrated Approaches for Costing Design Alternatives, Guillermo F. Salazar, Stephanie Foulke and Luigi Distoration (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p848-85.
Lunar Base Requirements for Human Habitability, Gary T. Moore, Kerry L. Paruleski, Janis Huebner-Moths, Joseph P. Fieber and Patrick J. Rebholz, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeb, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p822-42-39.
Manufactured Wood Joists—Noncollapse Failure, Theodore G. Padgett Ir. CF Eeb 92 o 285-64

Manufactured Wood Joists—Noncollapse Failure, Theo-dore G. Padgett, Jr., CF Feb. 92, p58-64.

Bulk cargo Bulk Commodity Terminals—Planning for the Future Competitive and Environmental Challenges, Gordon W. Zonailo, (Ports '92, David Torseth, ed., 1992), p695-708.

p695-708. Planning Operations of Bulk Loading Terminals by Simulation, Lal C. Wadhwa, WW May/June 92, p300-315. Technology—Key to Environmental Success, Paul Soros, (Ports '92, David Torseth, ed., 1992), p189-202. Waste Water Management at Bulk Terminals, Peter White, (Ports '92, David Torseth, ed., 1992), p178-188.

Bulk density
Void Ratio of Noncohesive Soils and Similar Materials,
B. Aberg, GT Sept. 92, p1315-1334.

Planning Operations of Bulk Loading Terminals by Simu-lation, Lal C. Wadhwa, WW May/June 92, p300-315. Waste Water Management at Bulk Terminals, Peter White, (Ports '92, David Torseth, ed., 1992), p178-188.

Bulkheads
Deep Water Container Wharf & Crane Foundation, John
E. Gant, (Ports '92, David Torseth, ed., 1992), p238-

247.

Design and Construction of Waterfront Facilities at U.S.

Navy Homeport at Ingleside, Texas, Edward H.

Stehmeyer, Jr., David W. Mock and Donald L. Goddeau, (Ports '92, David Torseth, ed., 1992), p64-656.

Naval Homeport Facilities at Pensacola, Florida, and

Mobile, Alabama, Gary W. Smith, Charles H. Evans,

Ill. and Michael A. Knott, (Ports '92, David Torseth,
ed., 1992), p630-643.

Pine Creek Tidal Hydraulic Study, James G. MacBroom

and Edward Hart, (Hydraulic Engineering: Saving a

Threatened Resource—In Search of Solutions, Marshall

Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p1154-1158.

Replacement of a Deteriorated Steel Sheet Pile Bulkhead.

Replacement of a Deteriorated Steel Sheet Pile Bulkhead, Vincent G. Miller and Vladimir Ostrov, (Ports '92, David Torseth, ed., 1992), p826-835.

Buoyancy
Oil Under Ice: Buoyancy Viscous Spreading, Sujeeva A.
Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p102-107.
On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.

A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, Kwang-W. You, Lie-Yauw Oey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p453-465.

Laptop Automated Navigation Aid Positioning System with Differential GPS, Charles F. Klingler, Michael R. Wroblewski and Scott Krammes, SU Nov. 92, p130-

**Bureau of Reclamation** 

Agricultural Option Contracts, John F. Scott, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl 38-143.

Design of Irrigation Distribution System, Steve Robertson, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p462-467.

Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p1-6.

Karamouz, ed., 1992), p.1-6.
Role of Land Information System in Operation and Maintenance of Irrigation Systems Bureau of Reclamation, James B. Robertson and Sharen L. Wood, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p.317-322.
Steady and Unsteady Flow Profiles in Reclamation, Curtis J. Orvis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.872-877.
The U.S. Bureau of Reclamation—New Directions in

The U.S. Bureau of Reclamation—New Directions in Water Management and Conservation, Allen R. Powers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p232-237.

Evaluation of Flowable Fly-Ash Backfill. I: Static Load-ing, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463.

Evaluation of Flowable Fly-Ash Backfill. II: Dynamic Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p464-474.

Local Buckling of Tubes in Elastic Continuum, James A. Cheney, EM Jan. 91, p205-216.

Measurement of Deformations in Buried Pipeline, W. F. Teskey, D. A. Bayly and I. R. Colquhoun, SU Feb. 92,

Mix Design for Flowable Fly-Ash Backfill Material, R. Janardhanam, F. Burns and R. D. Peindl, MT Aug. 92, p252-263.

Polyolefin Plastic Water Service Line Performance, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p585-597.

siness administration

Using a Lunar Base Scenario Context in Business Educa-tion, Cathleen S. Burns and Sherry K. Mills, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2172-2187.

1972, pc.172-181.
Using Computers to Competitive Advantage: Philosophy and Example, Philip C. Terry, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1105-1112.

Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p308-

Cable Structures and Lunar Environment, Mohammed Ettouney, Haym Benaroya and Nissim Agassi, AS July 92, p297-310.

Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p308-Cables Support Skylight Roof at Morgan Library, CE Jan. 92, p18-19.

92, p18-19.

Dynamic Behavior of Nonlinear Cable System. I. S. Mesarovic and D. A. Gasparini, EM May 92, p890-903. Dynamic Behavior of Nonlinear Cable System. II, S. Mesarovic and D. A. Gasparini, EM May 92, p904-920. Experimental Bridge Faces Heavy Loads, CE June 92, p29-30.

Fatigue Resistance of Large-Diameter Cable for Cable-Stayed Bridges, Koei Takena, Chitoshi Miki, Hirosuke Shimokawa and Kenji Sakamoto, ST Mar. 92, p701-

Microcomputer Analysis of Guyed Towers as Lattices, Raja R. A. Issa and R. Richard Avent, ST Apr. 91, p1238-1256.

pl 238-1256.

Nonlinear Impulsive Motions of Low-Tension Cables, Michael S. Triantafyllou and Christopher T. Howell, EM Apr. 92, p807-830.

Post-tensioned Cables Have Stabilized Before (Itr), Robert A. Fischman, CE July 92, p32.

Predicting Tower Guy Pretension Using a Neural Network, Raja R. A. Issa, Desmond Fletcher and Ruth Ann Cade, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodino, ed. and Jeff R. Wright, ed., 1992), p1074-1081.

graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1074-1081.
Slip Behavior of Cable against Saddle in Suspension Bridges, Koei Takena, Michio Sasaki, Kouichi Hata and Kazuo Hasegawa, ST Feb. 92, p377-391.
Tripod Crane Concept for Lunar Surface Construction, Haruyuki Namba and Martin M. Mikulas, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295.
Validation of the SEADYN90 Cable Simulation Model Using a Three-Dimensional Cable Deployment Data Set, Paul A. Palo, Linda C. Teragouchi and Maureen T. Smith, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p273-287.
Wire Recovery Length in Suspension Bridge Cable, Mohammed Raoof and Yu Ping Huang, ST Dec. 92, p3255-3267.

Cables, ropes
Advanced Fabrication and Erection Techniques for Long
Suspension Bridge Cables, Minoru Matsuzaki, Chihiko
Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-

Axial and Free-Bending Analysis of Spiral Strands Made Simple, Mohammed Raoof and Yu Ping Huang, EM Dec. 92, p2335-2351.

Dec. 92, p2335-2351. Fiber Ropes for Ocean Engineering in the 21st Century, John F. Flory, Henry A. McKenna and Mike R. Parsey, Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p934-947. Free-Bending Fatigue Life Estimation of Cables at Points of Fixity, Mohammed Raoof, EM Sept. 92, p1747-

mple Cord Composites, Anthony J. Paris, Ching-Chang Lin and George A. Costello, EM Sept. 92, p1939-1948.

Cadastral surveys

Developing Infrastructure Lifecycle Solutions, Steven B.

Glimpse and Jeffrey M. Young, (Computing in Civil

Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,

1992), p818-824.

Ecuador's Rural Cadasters and Land Titling Project (CA
TIR): Technical Process, Ricardo Javier Moreno, SU

Nov. 92, p118-129.

Caissons
The Caisson Solution, Bennie L. Benjamin, Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47.
Lepe-Scale Loading Tests of Shallow Footings in Pneumatic Caisson, Osamu Kusakabe, Yoshito Maeda and Masatoshi Ohuchi, GT Nov. 92, p1681-1695.
Manholes and Microtunneling, Evarett Cruz, Jr., CE Dec. 92, p52-55.

Calcium carbonate
Softening by Fluidized Bed Crystallizers, Willard D.
Harms, Jr. and R. Bruce Robinson, EE July/Aug. 92,

Campration
Alluvial Canals Adequacy, Siddig E. Ahmed, IR July/
Aug. 92, p543-554.
Appropriate Use of Deep-Bed Filtration Models, C. S. P.
Ojha and N. J. D. Graham, EE Nov./Dec. 92, p964980.

200. Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, Raymond M. Wright, Igor Runge, Rajat Roy Chaudhury and Daniel W. Urish, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467.

Calibration of Redundancy Factors for Highway Bridges, Michel Ghosn and Fred Moses, (Probabilistic Mechan-ies and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p344-347.

Calibration Strategy for Urban Catchment Parameters, Yaacob Ibrahim and Shie-Yui Liong, HY Nov. 92, p1550-1570.

Coarse-Grain Parallel Computing Using ISIS Tool Kit, Ralph Finch and Shao-Kong Kao, CP Apr. 92, p233-244.

evelopment of the San Fernando Basin Groundwater Flow Model, Shih-Huang Chieh, Kelli A. Shuter and Melih M. Ozbilgin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), Develop p248-253

p248-233.
Explicit Calculation of Pipe-Network Parameters, Paul F.
Boulos and Don J. Wood, HY Nov. 90, p1329-1344.
In-Flight Calibration of Mass Spectrometer, Dumitru Ristoiu, Gavrila Toderean, Iosif Chereji, Daniel Olimpiu Ursu and Vadim Glebovici Istomin, (Engineering, Construction, and Operations in Space III, Willy Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2264-2270.
Modeline Stormwater Basin Effects, Robert G. Traver, Modeline Stormwater, Basin Effects, Robert G. Traver,

Modeling Stormwater Basin Effects, Robert G. Traver and Ronald A. Chadderton, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p855-860.

Prediction of Natural Channel Hydraulic Roughness, Sid-dig E. Ahmed and Mohammed B. Saad, IR July/Aug. 92, p632-639.

Verification of a 3-D Hydrodynamic Numerical Model, David Daniel Abraham, Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.22-230.

Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.

California

Catherna The 1991 Revolution in Water Management, George R. Baumli, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p322-327.

Monammad Karamouz, ed., 1992), p322-327.

Aesthetic Design Philosophy Utilized for California State Bridges, James E. Roberts, UP Dec. 92, p138-162.

Alameda Transportation Corridor, Arthur B. Goodwin, (Ports '92, David Torseth, ed., 1992), p94-107.

Application of Traffic Engineering Concepts to Pleasure Boat Traffic, Russell H. Boudreau, Michael C. Leue and James R. Walker, (Ports '92, David Torseth, ed., 1992), p248-262.

Articulating Block Mat Revetment for Whaler's Village, Robert A. Nathan and David G. Cannon, (Coastal En-gineering Practice '92, Steven A. Hughes, ed., 1992), p.268-284.

Broad-Crested Weir Application on 15,000-Acre Farm, S. W. Styles, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p300-304.

ed., 1992), p300-304.
California's Recession Remedy, CE Sept. 92, p11.
California's Tradable Emissions Policy and Greenhouse
Gas Control, John P. Dwyer, EY Aug. 92, p59-76.
Caltrans is on the Road Again, CE June 92, p11.
Computer Support for Water Quality Management in San
Diego Bay, A. E. Bale and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions,
Mohammad
Karamouz, ed., 1992), p176-181.

Conjunctive Use—Advantages, Constraints, and Examples, Jack J. Coe, IR May/June 90, p427-443.

Earthquakes: A New Look at Cracked Masonry, Ran-dolph Langenbach, CE Nov. 92, p56-58.

GOUDD LANGENDRACH, CE NOV. 92, p56-58.
Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Mohammed N. Chang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p975-988.
Estimating Accident Benefits of Reduced Freeway Congestion, Edward C. Sullivan, TE Mar./Apr. 90, p167-180.

Evapotranspiration Data Management in California, R. L. Snyder and W. O. Pruitt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-133.

Fast-Track Slide Fix, CE Dec. 92, p19-20.

Groundwater Recovery Program for Southern California, Andrew Sienkiewich, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p242-247.

p. 242-241.

In-Channel Sediment Basins: An Alternative to Dam-Style Debris Basins, Wendy S. Gist, Scott E. Stones-treet and Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p. 1000-1003.

L.A. Metro Rail Red Line Motoring Toward Start-up, CE Feb. 92, p20.

The Last Freeway, Jack Hallin, CE May 92, p60-63. Los Angeles-Long Beach Harbors Model Enhancement Program, William C. Seabergh, S. Rao Vemulakonda and James Rosati, III., (Ports '92, David Torseth, ed., 1992), p884-897.

Operation of the Central Valley Project During California's Drought, John F. Burke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p348-353.

Perils of Point Loma, John Prendergast, CE Nov. 92, p62-65.

p02-03.

Planning for Water Conservation Through Irrigation System Modernization and Rehabilitation, A. K. Dimmitt, K. I. McLaughlin, F. Z. Kamand and D. G. Welch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p234-239.

Rubber Dam Holds Water, CE Feb. 92, p88. Something Fishy in the Subways, CE Dec. 92, p8.

Tunnel Grouting Record Pumped Up in Los Angeles, CE Feb. 92, p88.

Use of Machine Vision in Bedform Studies, Peter A. Mantz and Wenxue Li, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p840-845.

The Wide-Angle Optoelectronic Stereo Scanner WAOSS for the Soviet Mars 94/96 Missions, Rainer Sandau and Dieter Certel, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2241-2251.

Behaviour of Used CANDU Fuel Stored in 150°C Mois-ture-Saturated Air, K. M. Wasywich and C. R. Frost, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1166-1173.

Canada's Green Plan: Unique Approach to Preserving Environment, Thomas J. Selinger, El Oct. 92, p349-

Sour Canadian High-Level Radioactive Waste Management System Issues, C. J. Allan, B. R. Gray and P. D. Stevens-Guille, (High Level Radioactive Waste Management, High Level Radioactive Waste Maragement Program Committee, 1992), p11-17.

Canadian Lab Gets Under Building Skins, CE Oct. 92,

Description of the Canadian Nuclear Fuel Waste Disposal Concept, K. W. Dormuth, P. A. Gillespie and S. H. Whitaker, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1737-1742.

Design and Construction of Two Major Experiments at the URL, P. M. Thompson, B. H. Kjartanson and R. S. Read, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1082-1089.

An Economic Evaluation of the Thunder Bay Air Terminal Development Strategies, John P. Braaksma, Andrew Schmidt and Peter Friedrichs, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p124-147.

Future Impact of Trucking Reform on Railway Revenue, Ahmed M. Gadi and Afifi H. Soliman, TE Sept./Oct. 92, p729-743.

Metrication Between Canada and the USA—A Staped

92, p129-143.

Metrication Between Canada and the USA—A Staged Adoption, George E. Maddox, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p590-593.

Ontario Hydro Used Fuel Transportation Assessment, L. Grondin, D. Ribbans and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1209-1215.

Ontario Hydro's Plan for Used Nuclear Fuel P. D. D.

ntario Hydro's Plan for Used Nuclear Fuel, P. D. Stevens-Guille, H. A. Howes and J. Freire-Canosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p250-255.

mittee, 1992), p250-225.

Preclosure Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. Johansen, L. Grondin and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p481-488.

The Socio-Economic Impact Assessment for Nuclear Fuel Waste Disposal—Meeting the Challenges of the Canadian Environmental Review Process, J. Tamm and T. Wlodarczyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Formmittee, 1992, p1777-1785, British Columbia, Canada, C. Peter Jones and N. D. Nathan, CF Aug. 90, p142-160.

Three-Dimensional Finite Element Modelling of Nature Processing Program Commissional Finite Element Modelling of Nature Programs Comm

90, p142-160.

Three-Dimensional Finite Element Modelling of Near-Field Contaminant Transport in a Nuclear Fuel Waste Disposal Vault, Tin Chan and Frank Stanchell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p297-303.

Tidal Influence on the Stratification of the Miramichi Estuary, A. St-Hilaire, C. Bettignies, D. Booth and E. M. P. Chadwick, (Hydraulie Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Iennings, ed. and Nani G. Bhowmik, ed., 1992), p953-958.

Use of a Method Specification For In Situ Compaction of Clay-Based Barrier Materials, B. H. Kjartanson, N. A. Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1129-1136.

First Step Away from Lacey's Resime Equations, Michael A. Stevens and Carl F. Nordin, Jr., HY Nov. 90, p1422-1425.

Optimal Design of Parabolic Canals, G. V. Loganathan, IR Sept./Oct. 91, p716-735.

Canaba
Alluvial Canals Adequacy, Siddig E. Ahmed, IR July/
Aug. 92, p543-554.

Design of Control Algorithm for Operation of Irrigation
Canals, J. Mohan Reddy, Amadou Dia and Ahmed
Oussou, IR Nov./Dec. 92, p852-867.

Design of Trapezoidal Expansive Transitions, Prabhata
K. Swamee and Bharat C. Basak, IR Jan./Feb. 92, p61-

Field-Measured Hydraulic Resistance Characteristics in Vegetation-Infested Canals, Mohamed F. Bakry, Timo-thy K. Gates and Ahmed F. Khattab, IR Mar./Apr. 92, p.256-274.

First Step Away from Lacey's Regime Equations, Michael A. Stevens and Carl F. Nordin, Jr., HY Nov. 90, p1422-1425.

Flow Capacity through Wide and Submerged Vegetal Channels, M. W. Abdelsalam, A. F. Khattab, A. A. Khalifa and M. F. Bakry, IR Sept./Oct. 92, p724-732. Flow in Trapezoidal Channels, W. E. Hart, B. P. Thore-son and S. A. Musil, IR Nov./Dec. 92, p971-976.

Gradual Development of Bores in Canal Systems, Theo-dor Strelkoff, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p456-461. Identification of Control System for Canal with Night Storage, Wytze Schuurmans, Robert Brouwer and Peter Wonink, IR May/June 92, p360-369. New York Canal Inspection Drawing to a Close, CE Jan. 92, p24-25. Ortimal Design of Parabolic Canals, G. V. Loganathan.

New York Canal Inspection Drawing to a Close, CE Jan. 92, p24-25.

Optimal Design of Parabolic Canals, G. V. Loganathan, IR Sept./Oct. 91, p716-735.

de St. Venant Modelling in the Irrigation Environment, Ehab A. Messelhe and Forrest M. Holly, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1124-11129.

Stochastic Simulation and Optimization of Irrigation Canal Network Flows, Timothy K. Gates, Abdelmohsen A. Alshaikh and Samir I. Ahmed, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p474-480.

Technology Transfer Lessons from a U.S. Water District, Douglas Welch and Karen McLaughlin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p203-208.

Transient Hydraulic Model for Simulating Canal-Network Operation, F. N. Gichuki, W. R. Walker and G. P. Merkley, IR Jan./Feb. 90, p67-82.

Transients in Canal Network, Rajeev Misra, K. Sridharan and M. S. Mohan Kumar, IR Sept./Oct. 92, p690-707.

Wave-Motion Stability in Canals with Automatic Controllers, Simion Hancu and Paul Dan, HY Dec. 92, p1621-1638.

Cantillevers

Cantilevers
Bending of Rectangular Cross-Section Cantilever with
Cylindrical Cutouts, A. K. Naghdi, EM Apr. 92, p831842.

6742.
Effect of Footing Shape on Behavior of Cantilever Retaining Wall, John S. Horvath, GT June 91, p973-978.
Shear-Stress Distribution in Symmetrically Tapered Cantilever Beam, Edwin P. Russo and Gregory Garic, ST Nov. 92, p3243-3249.

Cap model Mixed Hardening, Three-Invariants Dependent Cap Model, Sahel N. Abduljauwad, Isa M. Al-Buraim and Hamdan N. Al-Ghamedy, EM Mar. 92, p620-637.

Capacity
Alameda Transportation Corridor, Arthur B. Goodwin, (Ports '92, David Torseth, ed., 1992), p94-107.
A Competitive Framework for Evaluating the Economic Benefits of Port Improvements, Ira Hirschman and Ogden Beeman, (Ports '92, David Torseth, ed., 1992), p563-576.
On-Off Terminal Ship-to-Rail Transfer. Asaf Ashar (Ports '92)

p503-576.

On-Off Terminal Ship-to-Rail Transfer, Asaf Ashar, (Ports '92, David Torseth, ed., 1992), p108-120.

Optimal Capacity Expansion in Multi-Aquifer Systems, Hasan Yazıcışıl, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p432-438

Planning Operations of Bulk Loading Terminals by Simulation, Lal C. Wadhwa, WW May/June 92, p300-315.

Port of Ningbo Master Plan, Bruno Carunkstis, (Ports 92, David Torseth, ed., 1992), p72-84.

Predicting Influence of Bank Vegetation on Channel Capacity, Richard Masterman and Colin R. Thorne, HY July 92, p1052-1058.

Probabilistic Design of Open Drainage Channels, Said M. Easa, IR Nov./Dec. 92, p868-881. Suspended Sediment-Transport Capacity for Open Channel Flow, Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204.

Capital
Capturing Capital, Paul J. Zofnass, CE May 92, p67-69.

Capital costs
Building a Space Infrastructure: The Reclamation Experience, Stephen L. Gillett, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p69-17.
Economics of Tidal Power, T. L. Shaw, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p34-41.
Eleating or Fixed Dock for RO/RO Ship Operations.

Floating or Fixed Dock for RO/RO Ship Operations, Bankim Mallick and Curtis L. Ratcliffe, (Ports '92, David Torseth, ed., 1992), p709-722.

Capital improvement
Critical Elements of Development Impact-Fee Programs,
Arthur C. Nelson, James C. Nicholas and Julian C.
Juergensmeyer, UP May 90, p34-47.
Impact Fees: Practical Guide for Calculation and Implementation, Dennis H. Ross and Scott Ian Thorpe, UP
Sept. 92, p106-118.

Carbon dioxide

Carbon dioxide
Characterization of the Topopah Spring and Tiva Canyon
Tuffs at Yucca Mountain, Ajeet Singh, Shamsuddin
llias and Gary Tatterson, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1953-1958.
Development of a Gas-Liquid Reaction Injection System,
Shunsuke Shimada, Masanori Ide and Hiromu Iwasa,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p325-336.
Diffusion of Carbon Dioxide and Icding Thematy

1992), p325-336.

Diffusion of Carbon Dioxide and Iodine Through Yucca Mountain Tuffs—Effects of Temperature and Moisture Content, Tevfik Bardakci, Franklin G. King and Ajeet Singh, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1946-1952.

Engineering-Econometric Model of Energy Demand, Fabricio Carlevaro, Jean-Luc Bertholet, Jean-Paul Chaze and Patrick Taffe, Ey Aug. 92, p109-121.

Equity and International Agreements for CO<sub>2</sub> Containment, Dallas Burtraw and Michael A. Toman, Ey Aug. 92, p122-135.

Geochemical Model for <sup>14</sup>C Transport in Unsaturated

92, p122-135.
Geochemical Model for <sup>14</sup>C Transport in Unsaturated Rock, Richard B. Codell and William M. Murphy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1959-1965.
Global Climate Change Effects on Water Quality, G. K. Meyer and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p19-24 p19-24.

Carbon monoxide
Developing Protocols for Motor Vehicle Air Quality
Modeling, Peter H. Guldberg, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),
p306-314.
GIS for Transportation and Air Quality Analysis, Reginald R. Souleyrette, Shashi K. Sathisan, David E.
James and Soon-tin Lim, (Transportation Planning and
Air Quality, Roger L. Wayson, ed., 1992), p182-194.
Integrating Traffic and Air Quality Modeling Techniques
to Predict Pollutant Concentrations Near Intersections,
Guido Schattanek, (Transportation Planning and Air
Quality, Roger L. Wayson, ed., 1992), p315-326.
Intersection Air Quality Analysis, John Zamurs, Robert
Conway and Stephen S. Rosen, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),
p383-297.

Keynote Presentation, Julie Belaga, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p7-

Modeling Guideline for Air Quality Analysis of Intersections, George J. Schewe, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.298-305.
 Roundtable Discussion Sessions, Thomas Wholley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.271-275.

Wayson, ed., 1725, part-12.

Carbonate rocks

Beach Nourishment with Aragonite and Tuned Structures, Kevin R. Bodge, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p75-89.

Exploration/Grouting in Cambro-Ordovician Karst, Joseph A. Fischer, Richard W. Greene, Joseph J. Fischer and Frank W. Gregory, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p350-359.

Carbonation
Chloride Binding Capacity in Cement-Fly-Ash Pastes, O.
A. Kayyali and M. Sh. Qasrawi, MT Feb. 92, p16-26.

Careers
Future Resources for Engineering, Peggy A. Johnson, Jill
D. Leasure and Estela S. Llinas, El Jan. 92, p30-37.
Professionalism and Marketing of Civil Engineering Profession, John A. Alexander, El Jan. 91, p10-20.
Women in Civil Engineering—Graduate's Perspective,
Jack D. Bakos, Jr., El Jan. 92, p16-29.

Cargo.
Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.
Salvage Law for Outer Space, Wayne N. White, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422.

Cargo handling
Bulk Commodity Terminals—Planning for the Future
Competitive and Environmental Challenges, Gordon
W. Zonailo, (Ports '92, David Torseth, ed., 1992),

W. Zonailo, (Ports '92, David Torseth, ed., 1992), p695-708.

A Competitive Framework for Evaluating the Economic Benefits of Port Improvements, Ira Hirschman and Ogden Beeman, (Ports '92, David Torseth, ed., 1992), p563-576.

JKF Airport Cargo System Will Be U.S. First, CE May 92, p12-13.

Port of Portland's Berth 601 Floating Dock, Elmer W. Ozolin and Walter R. Haynes, (Ports '92, David Torseth, ed., 1992), p150-163.

Vacuum Alumina Unloader for Port of Everett, Curtis O. Hecla, (Ports '92, David Torseth, ed., 1992), p143-149.

West Point Temporary Construction Dock, Chris Sundberg and Jerry Stubbs, (Ports '92, David Torseth, ed., 1992), p723-736.

Cargo transportation
Cargo Transport to the Lunar Surface Using a Three
Rotor Sling, Brian Tillotson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992), Stein Sture, p1010-1021.

p1010-1021.

ESCAPE: Small Payload Strategies, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1542-1545.

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.

Ship-Berth Link as Bulk Queueing System in Ports, Zoran R. Radmilovich, WW Sept./Oct. 92, p474-495.

The Landfall of Hurricane Hugo, Billy L. Edge, Ben L. Sill and Orville T. Magoon, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p988-993.

Cartography
Ecuador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, Ricardo Javier Moreno, SU Nov. 92, p118-129. Cascade
Waterfall Aeration Works, Renso Gasparotto, CE Oct.
92, p52-54.

92, p52-54.

Case reports
Baltimore City's 1989 Sludge Crisis—A Case History,
George G. Balog, Robert T. Mohr and Nicholas H.
Frankos, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p256-261.

The Behavior of Reinforced Soil Walls Constructed by
Different Techniques, A. McGown, K. H. Loke and R.
T. Murray, (Grouting, Soil Improvement and Geosynthelics, Roy H. Borden, ed., Robert O. Holtz, ed. and
Ilan Juran, ed., 1992), p1237-1248.

Behavior of Thermal Wedges in Oscillating Reservoir
Flow: A Case Investigation, Vahid Alavian, Neil Sutherland and Ming Shiao, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p501-506.

Brackish Groundwater Desalting in Southern California:

pp501-506.

Brackish Groundwater Desalting in Southern California:
A Summary of Case Studies, Lee A Jacobi, Julius Y.
Ma and William R. Everest, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p587-592.

Case History Evaluating Field Vane Correction Factors,
W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani and Henry T. Taylor, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p737-755.

Case History: TRE At a Refinery/Chemical Plant, Carol L. La Breche and Russell S. Dykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p555-560.

Case Studies of Structures with Man-Induced Vibrations, H. Bachmann, ST Mar. 92, p631-647.

Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, John L. Merriam, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p623-630.

Case Study: Design of a Traditional Village Master Plan, Raul J. Cotilla, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p111-120.

Case Study: Design of Groundwater Quality Monitoring Systems, Leonard Cilli and Richard Bizub, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p75-79.

Case Study of an Offshore Horizontal Boring, John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p697-712.

Case Study—Elliott Bay Marina Floating Moorage, Craig S. Funston, (Ports '92, David Torseth, ed., 1992), p263-274.

Civil Engineering Education: Case Study Approach, Jeffrey S. Russell and Bob G. McCullouch, El Apr. 90, p164-174.

p104-174.
Coastal Geomorphology and Sand Budgets Applied to Beach Nourishment, Timothy W. Kana and F. David Stevens, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p29-44.
Colgate Palmolive Transportation Impact Case Study, Martin J. Wells and Jay S. Bockisch, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p154-158.
Companies of Labor Productivity, H. Randolph Thoma-

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Computer Modeling Responsibilities for Municipalities, Michael L. Deas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.338-

343.

Construction of a Far-Term (2020+AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Montoya and Ann Campbell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p427-440.

Deep Cuts and Ground Movements in Chicago Clay, Richard J. Finno, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143.

The Design of a Reclamation Scheme by Preloading, S. Ossama Mazen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1019-1030.

A Design Theory for Compaction Grouting, John H.

A Design Theory for Compaction Grouting, John H. Schmertmann and James F. Henry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p215-228.

Determining Velocity Gradient in a Flocculation Basin—A Case Study, Christopher H. Yu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p593-598.

The Durability of Rubble Mound Armour in Service—A Case Study, Terry Piggott, Sam Smith and Angus Jack-son, (Durability of Stone for Rubble Mound Breakwat-ers, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p254-267.

1992), p234-267.

Earthflow Evaluation and Control: A Case History, Michael R. Thomas and Alan L. Kropp, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864.

Earthquake Support Grouting in Sands, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888.

Estimation of Travel Related Inputs to Air Quality Mod-

1992), p879-888.
Estimation of Travel Related Inputs to Air Quality Models, Terry L. Miller, Arun Chatterjee, Jerry Everett and Cindy McIlvaine, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125.
Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

Expert System for Wastewater Collection System Infiltration and Inflow Mitigation, Fadi A. Karaa, Hany H. Zaghloul and Richard Scholze, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p121-128.

Geomorphic and Hydraulic Factors Affecting Stream Stability at New York Thruway Bridges, Suffan A. Khonoker, Keith E. Giles, Carl J. Montana and Mark A. Hisson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p912-918. GIS, Remote Sensing, and Master Water Plan: A Case Study, Uzair M. Shamsi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p795-702.

Grouting Improvement of Foundation Soils, Francesco

p695-702.
Grouting Improvement of Foundation Soils, Francesco Gallavresi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1-38.
Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-261.
Guidance for Engineering-Design-Class Lectures on Ethics, Richard H. McCuen, El July 90, p251-257.
Hazardous Waste Containment with a Bentonite Cutoff Wall, Chikashi Sato, Derek A. Braithwaite, Angelos Protopapas and Paul P. Stewart, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1298-1310.

Robert O. Hoitz, ed. and Ilan Juran, ed., 1992), p1298-1310.

Houston Intercontinental Airport Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

Howe Truss Behavior Interpreted by Deflections, Zbigniew Cywiński, Marek Jasina and Stefan Niewitecki, CF Aug. 92, p151-160.

Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, K. H. Frizell, (Roller Compacted Concrete III), Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439.

Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Integration of Chemical and Cement Grouting Techniques for Controlling Mine Water Inflows through Fractured Ground, Trevor G. Carter, Stephen H. E. Phillips and Patrick C. Cochrane, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-422.

422.

International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992, 0-87262-871-X, 284pp.

Jet Grouting for a Self-standing Wall, Gohichi Miyasaka, Yutaka Sasaki, Toshiaki Nagata, Mitsuhiro Shibazaki, Masahiro Iji and Masami Yoda, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p144-

Robert U. Hottz, ed. and lian Juran, ed., 1992), p144155.

Jet Grouting in Airport Construction, Yoshious Ichihashi, Mitsuhiro Shibazaki, Hiroaki Kubo, Masahiro Iji and Akira Mori, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193. Liner-System Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668. Limehouse Link Tunnel Project—London—A Case History, Patrick McCreight, David Scott and George Tamaro, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p65-90.

Masonry as a Structural Material, Daniel P. Abrams, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-129.

Multimedia in the Civil Engineering Classroom, Glench Material of Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p245-252.

Multi-Stage Diffused Bubble Aeration System for the Removal of Volatile Organics and Radon, a Case History, A. David Marino and Jerry Lowry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p581-586. Natural Landslides, George F. Sowers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p804-833. Necessary Redundancy in Geotechnical Engineering, Jory O. Osterberg, GT Nov. 89, p1511-1531. Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992, 0-87262-887-6, 235pp.
Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), p418-429. On the Influence of Seismically Induced Residual Forces on Bridge Abutment Design, Raj Siddharthan and Mahmoud El-Gamal, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p51-54.

p51-54.

p51-54.

An Optimization Methodology for Crew Assignment Based on Maximizing Labor Productivity, John A. Kuprenas and Anthony D. Songer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p182-189.

Pavement Improvement with Asphaltic Membranes, Ilan Ishai, Nathan Livnat and Moshe Livneh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1922).

p1067-1079.

Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p77-90.

Feb. 92, p77-90.

File Driving: Can it Cause Slope Movement? D. G. Anderson, R. E. Riker and B. P. Erickson, (Ports '92, David Torseth, ed., 1992), p350-363.

Planning for Water Conservation Through Irrigation System Modernization and Rehabilitation, A. K. Dimmitt, K. I. McLaughlin, F. Z. Kamand and D. G. Welch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299.

Recent European Developments in Construction Constitution

1992), p.294-299.
Recent European Developments in Constructing Grouted Slabs, Norbert Tausch, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.301-312.
Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

D. Hansen, ed. and Francis G. McLean, ed., 1992), p491-305.
Reservoir Water Quality Modeling in Northern Portugal—Some Case Studies, A. C. Rodrigues and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p804-809.
Review of Wetting-Induced Collapse in Compacted Soil, Evert C. Lawton, Richard J. Fragaszy and Mark D. Hetherington, GT Sept. 92, p1376-1394.
Settlement Reduction by Soil Fracture Grouting, Mario J. Pototschnik, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p398-409.
Settlement, Structural Failure, and In-place Repair of Above Ground Storage Tanks, Richard M. Berry and Robert P. Buhrow, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p240-251.
Slope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867.
Soilcrete Cut-Off Wall for Undercrossing a Busy Rail Line, Walter Steiner, Ernst Schneider and Manfred Cartus, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p384-397.
Some Case Histories of Armor Stone Production, Mel Hill, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p212-221.
Sonic NDE of Structural Concrete, Larry D. Olson, (Non-

riui, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p.21-2-21.

Sonic NDE of Structural Concrete, Larry D. Olson, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p70-81.

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p599-605. Stable Channel and Environmental Design Considerations for an Urban Flood Control Project, Edward F. Sing, Daniel Pridal and Thea Lane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p464-469. Steady and Unsteady Flow Profiles in Reclamation, Curtis J. Orvis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p872-877. A Storm Water Utility Case Study, Salt Lake City, Utah, Charles H. Call, Jr., (Water Resource: Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p192-197.
Structural and Non-Structural Alternatives for Accom-

Seaben of Somanions, soliantman Karamouz, ed., 1972), p792-797.

Structural and Non-Structural Alternatives for Accommodating Larger Floods at Dams, Louis E. Buck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1228-1233.

Temporary Tunnel Excavation Support by Chemical Grouting, Francis B. Gularte, Gary E. Taylor and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p423-435.

Threatened Levees on Sherman Island, Roger Foott, Richard Sisson and Roy Bell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p756-774.

Three Case Histories of Waste Stabilization, Edward L. Kosinski, David S. Martin and Alan R. Ringen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1261-1272.

1992), p1261-1272.

den, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), pl 261-1272.

Tunnel Seepage Control by the Interior Grouting Method, Bruce A. La Penta, Reuben H. Karol and Charles H. Arnold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p436-448.

Two New Specialty Geotechnical Processes for Slope Stabilization, Donald A. Bruce, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1505-1519.

Uniform Traffic Impact Assessment Studies—A Case History of Riverside County, California, Lawrence A. Toerper, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p14-117.

Use of Cement-Bentonite for Cutoff Wall Construction, B. L. Kilpatrick and S. J. Garner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p803-815.

815.
The Use of Dynamic Compaction to Consolidate Nuclear Waste, Cliff Schexnayder and Robert G. Lukas, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 311-1323.
Use of Multimedia in a Sophomore Design Course, Mark L. Valenzuela, Gregory G. Deierlein and Richard N. White, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p229-236.
Water Quality Modelling: Prediction of the Transport of Water Constituents in the Weser Estuary (Germany), Agnar Müller, Iris Grabemann and Bernhard Kunze, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alah Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Lax round In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, (Environmental Engineering Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p334-339.

Cast-In-place piles
Bearing Capacity of Auger-cast Piles in Sand, William J.
Neely, GT Feb. 91, p331-345.

Cast-in-place pipes Field Test of 72-in-Diameter Cast-in-Place Nonrein-forced Concrete Pipe, Curtiss W. Gilley, Lester H. Ga-briel and Robert S. Standley, TE Jan/Feb. 92, p1-19.

Cast-In-place structures
Aesthetic Design Philosophy Utilized for California State
Bridges, James E. Roberts, UP Dec. 92, p138-162.
Behavior of Isotropic R/C Bridge Decks on Steel Girders,
1. -K. Fang, J. Worley, N. H. Burns and R. E. Klingner,
ST Mar. 90, p659-678.

The Crown and the Curtain Wall, Dudley G. McFar-quhar, CE Aug. 92, p62-65. The OCEA Awards of Merit, Teresa Austin, CE July 92, p50-53. PCA Seeks Concrete Bridge Candidates, CE Aug. 92, p8.

Catchments

Catchineans
Assessment of Derived Flood Frequency Distributions,
Timothy H. Raines and Juan B. Valdes, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p268-273.
Automated Polipsetics of Catchinest Amp. Boundaries

Naramouz, ed., 1992), p262-273.
Autonated Delineation of Catchment Area Boundaries with TINs, Norman L. Jones and James Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p347-352.
Calibration Strategy for Urban Catchment Parameters, Yaacob Ibrahim and Shie-Yui Liong, HY Nov. 92,

Contaminated Sediment Transport During Floods, Thomas A. Fontaine, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p210-

Definition of a Weighting Function for Rainfall in Aggregated Rainfall-Runoff Models, Paolo Bartolini and Juan B. Valdés, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p537-

Drainage Analysis Using Triangulated Irregular Net-works, Norman L. Jones and James Nelson, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p719-726.

Wright, ed., 1992), p719-726.
Sediment Rating Curves Based on Ranked Values, Wolfgang Summer and Jean-Pierre Villeneuve, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p683-688.
Station Selection for Pooling Flood Data in a Densely Gauged Region of the UK, Duncan W. Reed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p25-30.

Catenaries
Effect of Static Offset on TLP Modeling, C. Oran, EM
Jan. 92, p74-91.

Jan. 92, p74-91.
Cathodic protection
Cathodic Protection Diagnostics for Corrosion Mitigation of Infrastructure Components, Vicis L. Van Blaricum, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p137-144.
Sprayed-Zinc Galvanic Anodes for the Cathodic Protection of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p732-747.
Tunnel Takes Cathodic Protection, Guang-Nan Fanjiang, Michael Mazzuca, Lin Nathan and Robin Pawson, CE
Nov. 92, p59-61.

Nov. 92, p59-61.

Causeways Environmental Effects of Beaufort Sea Causeways, J. M. Colonell, B. J. Gallaway and A. W. Niedoroda, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974.

Modeling Nearshore Currents in the Vicinity of the Endi-cott Causeway, Alaska, Peter Hamilton, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.227-238.

Caverns

Norway's Olympic Cavern, Rajinder Bhasin and Fredrik Løset, CE Dec. 92, p60-61.

Air Entrainment by Spillway Aerators, Peter Rutschmann and Willi H. Hager, HY June 90, p765-782.

Hydroturbine Cavitation Erosion, J. L. Gordon, EY Dec. 92, p194-208.

Influence of Liquid Length Variation in Hydraulic Tran-sients, Enrique Cabrera, José Abreu, Rafael Pérez and Antonio Vela, HY Dec. 92, p1639-1650.

Necking of Creep-Cavitating Bars, C. H. Lu and A. J. Levy, EM Apr. 92, p746-762.

Bending of Rectangular Cross-Section Cantilever with Cylindrical Cutouts, A. K. Naghdi, EM Apr. 92, p831-842.

Flow Visualization of Lid-Driven Cylindrical Cavity Flow, You-Gon Kim and Ching-len Chen, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p393-396.

A Face-Lift for Lincoln, Peter L. Rinaldi and Andrea Giorgi Bocker, CE Sept. 92, p62-64.

Dams Going Safely over the Top, R. Lee Wooten, George R. Powledge and Stephen L. Whiteside, CE Jan. 92, p52-54.

Anisotropic Behavior of Cement-Grouted Sand, Ray-mond J. Krizek and Maan Helal, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p541-

Chemical Based Cement Grout System for Rock Grouting, A. V. Shroff and D. L. Shah, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p651-

Effectiveness of Injected Cement Grout under Harsh En-vironmental Conditions, G. Ballivy, J. C. Colin and T. Mnif, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p588-600.

The Effects of Fillers and Admixtures on Grout Performance, Sandra Z. Tosca and Jeffrey C. Evans, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992). p337-349

Effects of Mixing on Rheological Properties of Microfine Cement Grout, Lois G. Schwarz and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p512-525.

Exploration/Grouting in Cambro-Ordovician Karst, Joseph A. Fischer, Richard W. Greene, Joseph J. Fischer and Frank W. Gregory, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and ilan Juran, ed., 1992), p350-359.

Fundamental Observations on Cement Based Grouts (1): Traditional Materials, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p474-485.

Fundamental Observations on Cement Based Grouts (2): Microfine Cements and The Cemill® Process, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, Grouting, Soil Improvement and Geosynthetics, Roy H. Border, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p486-499.

hybrid Grouting Techdniques to Stabilize a Weakly Cemented Sandstone at King Talal Dam, Jordan, B. A. Anthony, M. P. Bruen, R. R. Mann and Z. Alem, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.

Integration of Chemical and Cement Grouting Techniques for Controlling Mine Water Inflows through Fractured Ground, Trevor G. Carter, Stephen H. E. Phillips and Patrick C. Cochrane, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-

Mechanical Properties of Microfine Cement/Sodium Sili-cate Grouted Sand, Raymond J. Krizek, Hung-Jiun Liao and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1922, p688-699.

Microfine Cement/Sodium Silicate Grout, Hung-Jiun Liao, Roy H. Borden and Raymond J. Krizek, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p676-687.

Preferred Orientation of Pore Structure in Cement-Grouted Sand, Maan Helal and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p526-540.

Progress and Developments in Dam Rehabilitation by Grouting, Donald A. Bruce, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p601-613.

Properties of Cement Grouts and Grouted Sands with Additives, C. Vipulanandan and S. Shenoy, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992).

p500-511.

Rehabilitation of Cocnrete Dams: Laboratory Simulation enapinitation of uccurrete Dams: Laboratory Simulation of Cracking and Injectability, G. Ballivy, K. Saleh, T. Mnif, J. Maniez, L. M. Landry and M. Nadeau, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625.

Rheological Properties of Microfine Cement Grouts with Additives, Ulf Håkansson, Lars Hässler and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p551-563.

Juran, ed., 1972, p. 531-503.
Some Factors Related to Injected Shape in Grouting,
Akira Mori, Masahito Tamura, Hideaki Shibata and
Hideo Hayashi, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O. Holtz,
ed. and Ilan Juran, ed., 1992), p313-324.

eu. and Han Juran, ed., 1992), p313-324.

Binghamian Grouts, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p663-675.

Ultrafine Cement Tests and Dam Test Grouting, William J. Clarke, Millard D. Boyd and Maan Helal, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p626-638.

Use of Cement-Bentonite for Cutoff Wall Construction, B. L. Kilpatrick and S. J. Garner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p803-

Cracking in Cement Paste, David Darwin, Kirk W. Ketcham, Francisco A. Romero and Jeffrey L. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497.

Chloride Binding Capacity in Cement-Fly-Ash Pastes, O. A. Kayyali and M. Sh. Qasrawi, MT Feb. 92, p16-26. Fracture Toughness for Steel Fiber-Cement Paste Interfacial Zone, Mitsunori Kawamura and Shin-ichi Igarashi, MT Aug. 92, p227-239.

The Microstructure of Hardened Cement Paste and Concrete, J. Francis Young (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p737-739.

Properties of Aggregate-Cement Interface for High Per-formance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p852-855.

Protected-Paste Volume of Air-Entrained Cement Paste.
Part 1, K. Natesaiyer, K. C. Hover and K. A. Snyder,
MT May 92, p166-184.

Cementation

A Method for Estimating the In Situ Cohesion of Cemen-ted Conglomerate, Edward A. Nowatzki and David Kidd, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p158-174.

Backfill-Stiffened Foundation Wall Construction, Robert Nicholls, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p286-295.

Cement-Stabilized Soil for Coal Retaining Berms, Gary J. Van Riessen and Kenneth D. Hansen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p981-992

Concrete Construction on the Moon, T. D. Lin and Nan Su, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1359-1369.

Effect of Particle Contact Bond on Shear Modulus, Tzyy-Shiou Chang and Richard D. Woods, GT Aug. 92, p1216-1233.

Engineering Properties and Potential Uses of By-Product Phosphygypsum, Ramzi Taha and Roger Seals, (Utili-zation of Waste Materials in Civil Engineering Con-struction, Hilary 1. Inyang, ed. and Kenneth L. Berge-son, ed., 1992), p250-263.

Son, ed., 1972, p.20-20.5.
Son, ed., 1972, p.20-20.5.
Evaluation of Partial Depth Spall Repair Materials and Procedures, Arti J. Patel, David G. Peshkin and A. Russell Romine, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759.

Experimental and Theoretical Study of Flexural Behavior of Polymer Fiber Reinforced, Cement-Treated Soils, Robert Liang, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1080-1091.

Genesis: The Creation of a Lunar Base, Paul Bialla, Nathan Nottke and Seishi Suzuki, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p13-

In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p334-339.

Micromechanics Based Design for Pseudo Strain-Hardening in Cementitious Composites, Victor C. Li and H. C. Wu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p740-

Moisture Effects on Flexural Performance of Wood Fiber-Cement Composites, Parviz Soroushian and Shashidhara Marikunte, MT Aug. 92, p275-291.

New Technique to Evaluale the Surface Degradation of Cementaneous Matrix, Takayuki Amaya and Kazunori Suzuki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1670-1675.

Numerical Analysis of Discrete Nonlinear Fracture Mechanics, Walter H. Gerstle and Ming Xie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p784-787.

Permanence of Grouted Sands Exposed to Various Water Chemistries, John M. Siwula and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1403-1419.

Permeability of Roller Compacted Concrete, Nemkumar Banthia, Michel Pigeon, Jaques Marchand and Jean Boisvert, MT Feb. 92, p27-40.

Plant Produces Cements for Rugged Environments, CE Sept. 92, p14.

Postcrack Scaling Relations for Fiber Reinforced Cemen titious Composites, Victor C. Li, MT Feb. 92, p41-57. Recent European Developments in Constructing Grouted Slabs. Norbert Tausch, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p301-312.

Selection and Laboratory Evaluation of Modifying Additives for Soil-Cement-Bentonite, T. S. McFarlane and R. D. Holtz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p1006-1018.

Stabilizing Compacted Clay Against Chemical Attack, Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567.

Stochastic Modeling of Short Fiber Reinforced Compos-ites—A Review, Jamshid Mohammadi and Artur S. Kurzydlo, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p479-482.

Three Case Histories of Waste Stabilization, Edward L. Kosinski, David S. Martin and Alan R. Ringen, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), pl261-1272.
Utilization of Carbide Lime Waste in Cement Mortar Mixes, Waheeb A. Al-Khaja, Ismail M. Madany and Mohammed H. Al-Sayed, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p320-331.
Utilization of Fly Ash in High Volumes for Low Strength Cement Composites, P. Balsguru, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p308-319.
Utilization of Waste Sulfur in Construction Materials and

319.
Utilization of Waste Sulfur in Construction Materials and as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, William C. McBee, Frank E. Ward, William T. Dohner and Harold Weber, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang. ed. and Kenneth L. Bergeson, ed., 1992), p116-127.

Five Years Later, How Are You Doing?, CE Dec. 92, p8.

Center-pivot irrigation
Design and Maintenance Factors Affecting Application Design and Maintenance Factors Affecting Application Uniformity of Low Pressure Center-Pivot Irrigation Systems, Brian K. Briggs, K. James Fornstrom and Lar-ry Pochop, (Irrigation and Drainage: Saving a Threat-end Resource—In Search of Solutions, Ted Engman, ed., 1992), p257-262.Optimum Center-Pivot Irrigation System Design with Tillage Effects, Y. Mohamoud, Thomas R. McCarty and Loyd K. Ewing, IR Mar./Apr. 92, p291-305.

Central America

Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-

213. Design of Miel II—A High RCC Dam, Alberto Marulanda, Fabio Amaya and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p83-98.

cis G. McLean, ed., 1974), posses.

Centrifuge

Modeling Effects of Chemical Explosives for Excavation
on Moon, Deborah J. Goodings, Chaun-Ping Lin,
Richard D. Dick, William L. Fourney and Leonhard E.
Bernold, AS Jan. 92, p44-58.

A Multiple Disk Centrifugal Pump as an Artifical Ventricle, Gerald E. Miller and Amrita Sidhu, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p976-979.
Use of Explosives on the Moon, Richard D. Dick, William L. Fourney, Deborah J. Goodings, Chaun-Ping
Lin and Leonhard E. Bernold, AS Jan. 92, p59-69.

Centrifuge model

Application of Centrifuge Modeling Technique to Slopes and Embankments, Dobroslav Znidarcic, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p521-

537.
Centrifugal Modeling of Drains for Slope Stabilization, Gregory S. Resnick and Dobroslav Znidarčić, GT Nov. 90, p1607-1624.
Centrifuge Models of Clay-Lime Reinforced Soil Walls, Erol Güler and Deborah J. Goodings, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1249-1260

Experimental and Theoretical Dynamic Compliances of Foundations, Ronald Y. S. Pak and Bojan B. Guzina, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p596-599.

Ceramics
Combustion Synthesis of Advanced Materials, J. J.
Moore, H. J. Feng, N. Perkins and D. W. Readey, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), pl 389-1400.
Composite Materials for Structures on Planetary Surfaces, Donald W. Radford, Willy Z. Sadeh and Boyle C.
Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 297-1308.

Densification/Creep Behavior of Experimental Glass-Ceramic Waste Forms for Immobilization of High-Level Calcined Waste at the Idaho Chemical Process-ing Plant, Krishna Vinjamuri, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p300-303.

Fracture Toughness Model of Fiber Reinforced Ceramics, Asher A. Rubinstein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedrwecki, ed., 1992), p232-235.

Microcrack Interaction Toughening in Ceramics and CMCs, Vistasp M. Karbhari, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1016-1019.

Through Through Through Through Through Thermal Liquefaction, Chandra S. Desai and Kirsten Girdner, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 9528-536.

Russell J. Miller, ed., 1992, p.528-398.
Waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing Plant, Krishna Vinjamuri, Swami V. Raman, Dieter A. Knecht and James D. Herzog, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1261-1271.

Certification

Certification
ASCE Board Says Yes to Move, No to Certification for
Civil Engineers, NE May 92, pl.
Consistency and Fairness in Geotextile Specifications, C.
Joel Sprague and Marshall Gaddy, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992, p.288-298.
Criticality Safety and Shielding Design Issues in the Development of a High-Capacity Cask for Truck Transport, Jack K. Boshoven, (High Level Radioactive Waste
Management, High Level Radioactive Waste
Management Program Committee, 1992), p.2156-2160.
Members Voice Concern on ASCE's Certification Plan

ment Program Committee, 1992), p2.156-2160. Members Voice Consern on ASCE's Certification Plan for Engineers, NE Feb, 92, p1. Quality Assurance at a High Level Waste Plant—The Successful Approval of WVP, Sellafield to BS5882/ ISO9002, Tim Houghton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p562-565. Specialty Certification: A View in Opposition, Harl P. Aldrich, Jr., CE Apr. 92, p6.

Change orders
Overhead and Profit on Change Orders, Hamid Sarvi, CE
Aug. 92, p59-61.

SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Channel beds

Channel been
Model for Determining Optimal Reservoir Releases to
Control Downstream Sedimentation Under Uncertainties of Sediment Transport Parameters, Carlos C. Carriaga and Larry W. Mays, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p526-531.
Modeline Channel Bed Transients Using Explicit ED.

Modeling Channel Bed Transients Using Explicit F-D Schemes, B. Morse and R. D. Townsend, HY Nov. 90, p1345-1356.

Seepage Optimization for Trapezoidal Channel, A. R. Ka-cimov, IR July/Aug. 92, p520-526. Velocity Profiles in Steep Open-Channel Flows, Akihiro Tominaga and Iehisa Nezu, HY Jan. 92, p73-90.

Channel Sesign Design of a Threshold Channel, Gregorio Vigilar, Jr. and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p729-734.

Flow Resistance of Riprap, Stephen T. Maynord, HY June 91, p687-696.

Modern Approach to Design of Grassed Channels, N. Kouwen, IR Sept./Oct. 92, p733-743.

Predicting Influence of Bank Vegetation on Channel Ca-pacity, Richard Masterman and Colin R. Thorne, HY

pacity, Richard Masterman and Colin R. Thorne, HY July 92, p1052-1058. Ship Simulation of the Houston Ship Channel, Houston, Texas, Dennis W. Webb and J. Christopher Hewlett, (Ports '92, David Torseth, ed., 1992), p898-911.

Use of Portable Simulator in Designing Channel Improvements for Port of Brownsville, Texas, Dennis Wayne Webb and Larry Leon Daggett, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614.

Erosion of Steep River Banks and Time Evolution To-wards Equilibrium Channel Shape, Agnes Kovacs and Gary Parker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p896-899.

River Bed Degradation Due to Abrupt Outfall Lowering, C. W. Lenau and A. T. Hjelmfelt, Jr., HY June 92, p918-933.

Trickle Channel Rehabilitation, Mark R. Hunter, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p504-509.

Channel flow

Computation of Flow in Ice-Covered Dune-Bed Chan-nels, J. Y. Yoon, V. C. Patel and R. Ettema, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p385-388.

Dimensionally Homogeneous Manning's Formula, Ben Chie Yen, HY Sept. 92, p1326-1332.

Evaluating the Hydrologic Functions of Wetlands, Abiola A. Akanbi and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487.

Predicting Influence of Bank Vegetation on Channel Capacity, Richard Masterman and Colin R. Thorne, HY July 92, p1052-1058.

Three Dimensional Modeling of Watershed Hydrology, M. N. Saquib and M. L. Kavvas, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p391-396.

Three-Dimensional Incompressible Flow Calculations with MacCormack's Method, Robert S. Bernard and Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 2219-2224. p219-224.

Three-Dimensional Thermal Jump in Stratified Cooling Channel, L.-L. Guo and R. E. Baddour, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p381-384.

Unit Hydrograph Derivation Using Geographic Informa-tion System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search Solutions, Mohammad Karamouz, ed., 1992), p7-12.

WSPRO Files for Slope-Area Computations, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334.

The Application of UNET to a Complex Channel Net-work, Marc C. Johnson, (Hydraulic Engineering: Sa-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1148-1153.

Harbour Development in Southern Part of Thailand, Su-tat Weesakul, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369.

Highway Construction and a Trout Stream Relocation, James Seksinsky, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p413-

In-Channel Sediment Basins: An Alternative to Dam-Style Debris Basins, Wendy S. Gist, Scott E. Stones-treet and Ronald R. Copeland, (Hydraulie Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1000-1005.

Levee/Floodwall Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808.

Physical Modeling of a High Velocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Ir. and Robert U. Castle, (Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992). 641.6-232 1992), p618-623.

1992, polio-22, polio-22,

Mariamouz, ed., 1992.), p304-509.
Use of Portable Simulator in Designing Channel Improvements for Port of Brownsville, Texas, Dennis Wayne Webb and Larry Leon Daggett, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614.

Channel morphology

Computer Simulation of River Channel Changes at a Bridge Crossing on a Point Bar, Howard H. Chang, Marshall E. Jennings and Steve Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p76-81.

Channel stabilization

Channel stabilization

A Design Manual for Coastal Fluidization Systems, Richard N. Weisman, Gerard P. Lennon and James E. Clausner, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p862-878.
Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydroulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nami G. Bhowmik, ed., 1992), p139-

144.
The Influence of Rectangular Pier Foundation on Local Scour, A. C. Parola, D. A. Schaefer, A. El-Khoury and B. M. Brown, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p132-137.
Stable Channel and Environmental Design Considerations for an Urban Flood Control Project, Edward F. Sing, Daniel Pridal and Thea Lane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p464-469.

Channel Restoration Above Elephant Butte Reservoir, Christopher A. Gorbach, [Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p114-119.

Design of a Threshold Channel, Gregorio Vigilar, Jr. and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p729-734.

Application of Traffic Engineering Concepts to Pleasure Boat Traffic, Russell H. Boudreau, Michael C. Leue and James R. Walker, (Ports '92, David Torseth, ed.,

1992), p248-262.

Automated Operation of Pumping Stations in Russia, Yuri A. Ermolin and Leonid I. Zats, IR July/Aug. 92, p555-563.

Calculation of Total Conveyance in Natural Channels, J. Garbrecht and G. O. Brown, HY June 91, p788-798. Cohesionless Fine-Sediment Bed Forms in Shallow Flows, Peter A. Mantz, HY May 92, p743-764.

Design Procedure for Flow Over Side Weirs, Ali Uyumaz and Roger H. Smith, IR Jan./Feb. 91, p79-90.

Flow Measurement with Rectangular Free Overfall, Vito Ferro, IR Nov./Dec. 92, p956-964.

Ferro, IR Nov. Dec. 92, p956-964. Hydraulic and Geomorphic Classification of the Upper Mississippi River System: Pilot Study of Three Pools, Nani G. Bhowmik and Renjie Xia, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p666-671. Hydraulic Geometry of Threshold Channels, Panayiotis Diplas and Gregorio Vigilar, HY Apr. 92, p597-614.

An Intrusive Fluid Mud Surveying System, Allen Teeter, Glynn Banks, Michael Alexander and Andrew Salkield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017. Normal-Depth Calculations in Complex Channel Sections, Edward D. Shirley and Vicente L. Lopes, IR Mar/Apr, 91, p220-2323. Rapidly Varied Flow Analysis of Undular Bore, Rodmey J. Sobey and Maarten W. Dingemans, WW July/Aug. 92, p417-436.

74. pp.11-4.50.
Rating Correction for Lateral Settlement of Parshall Flumes, Steven R. Abt and Kenneth J. Staker, IR Nov/Dec. 90, pp.78-803.
Researchers Search for Pearls of Wisdom, CE May 92, p8. Riprap Design in Marine Terminals, Sandra K. Martin and Stephen T. Maynord, (Ports '92, David Torseth, ed., 1992), p364-375.
Search Backers.

ed., 1992), p364-375.
Santa Barbara Harbor Assessment of Shoaling Frequency,
Russell H. Boudreau, Alan Alcorn and Stephen Fine,
(Coastad Engineering Practice '92, Steven A. Hughes,
ed., 1992), p447-461.
Scheduling Maintenance Dredging on Single Reach with
Uncertainty, Jay R. Lund, WW Mar/Apr. 90, p211231

Securing Strategic National Security Objectives Through Maritime Activities, S. G. Phernambucq and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-

321.
Ship Simulation of the Houston Ship Channel, Houston, Texas, Dennis W. Webb and J. Christopher Hewlett, (Ports '92, David Torseth, ed., 1992), p898-911.
Should the U.S. Accept the Concept of Navigable Depth? John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Toeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082.
Side Weir in Triangular Channel, Ali Uyumaz, IR Nov. J. Dec. '92, p965-970.
Uniform Aerated Chute Flow, Willi H. Hager, HY Apr.

Uniform Aerated Chute Flow, Willi H. Hager, HY Apr. 91, p528-533.

Using a Numerical Model to Evaluate Dredging Options, Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), Jennings, e. p1024-1029.

p1024-1029. Velocity Distribution Inside and Above Branched Flexible Roughness, Omnia El-Hakim and Mohamed M. Salama, IR Nov./Dec. 92, p914-927. Wave Interaction with Fluid Mud in Rectangular Trench, Francis C. K. Ting, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p75-78.

Lutes, ed. and John M. Niedzwecki, ed., 1992), p75Chaos
Bifurcations and Chaos in Structural Control, K. Hackl,
A. Cheng, C. Y. Yang and M. Chajes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,
ed., 1992), p664-667.
Equivalence Between Motions with Noise-Induced Jumps
and Chaos with Smale Horeshoes, Michael Frey and
Emil Simiu, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p660-663.
Modeling the Chaotic Behavior in Simple Shear Granular
Flows, Jan-Olov Aidanpää, Hayley H. Shen and Ram
Gupta, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), p1031-1034.
Nonlinear Impact and Chaotic Response of Slender
Rocking Objects, Solomon C. S. Yim and Huan Lin,
EM Sept. 91, p2079-2100.
Polynomial Chaos for Nonlinear Random Vibration, R.
Ghanem and P. D. Spanos, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p404-407.
Probabilistic Order of Chaotic Dynamics, A. H.-D.
Cheng, C. Y. Yang and K. Hackl, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p420-423.
Routes to Chaos of a Vertically Rotating Pendulum, S.
Yip and F. DilMaggio, (Engineering Mechanics, Loren
D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
p672-675.
Characteristic

Characteristics
Characteristic Dissipative Galerkin Scheme for Open-Channel Flow, F. E. Hicks and P. M. Steffler, HV Feb. 92, p337-352.
Local Scour Downstream of Box-Culvert Outlets, H. Abi-da and R. D. Townsend, IR May/June 91, p425-440.

Mathematical Characterization of Fabric and Its Use in Mechanics of Geomaterials, B. Muhunthan and J. L. Chameau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p725-728.

Charts for Timber Beam-Columns, Ramon Riba-Ramirez and Mehrdad Soltani, ST Feb. 92, p596-602, A New Design Chart for Reinforced Embankments, Soubra, C. Coulet and D. Rakotondramanitra, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1163-1174.

Chelading agents
Removing Selenium(IV) and Arsenic(V) Oxyanions with
Tailored Chelating Polymers, Anuradha Ramana and
Arup K. Sengupta, EE Sept./Oct. 92, p755-775.

Chemical growting

Building Protection from Tunneling in Downtown Los
Angeles, Loring A. Wyllie, Jr. and John A. Dal Pine
(Excavation and Support for the Urban Infrastructure,
T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),
p107-118.

Chemical Based Cement Grout System for Rock Grouting, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed.,
Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p651662

Current Chemical Grout Engineering in Japan, Ryozo Yonekura and Munehiko Kaga, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-

Development of a Gas-Liquid Reaction Injection System, Shunsuke Shimada, Masanori Ide and Hiromu Iwasa, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p325-336.

Earthquake Support Grouting in Sands, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888.

Estimation of Chemical Grout Void Filling by Electrical Resistivity, Hideo Komine, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p372-383.

Frontz, ed. and lian Juria, ed., 1992, p. 572-583.
Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p.240-261.

ed., 1992), p.240-261. Hybrid Grouting Techdniques to Stabilize a Weakly Cemented Sandstone at King Talal Dam, Jordan, B. A. Anthony, M. P. Bruen, R. R. Mann and Z. Alem, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.

Integration of Chemical and Cement Grouting Techniques for Controlling Mine Water Inflows through Fractured Ground, Trevor G. Carter, Stephen H. E. Phillips and Patrick C. Cochrane, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-

422.

Mechanical Properties of Microfine Cement/Sodium Siticate Grouted Sand, Raymond J. Krizek, Hung-Jiun Liao and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p688-699.

Microfine Cement/Sodium Silicate Grout, Hung-Jiun Liao, Roy H. Borden and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p676-687.

Progress and Developments in Dam Rehabilitation by

1992), p676-687.
Progress and Developments in Dam Rehabilitation by Grouting, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p601-613.
Recent European Developments in Constructing Grouted Slabs, Norbert Tausch, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p301-312.
Temporary Tunnel Excavation Sunport by Chemical

Tronz, cu. and Isan Juran, cu., 1992), p301-512. Temporary Tunnel Excavation Support by Chemical Grouting, Francis B. Gularte, Gary E. Taylor and Roy H. Borden, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p423-435.

Tunnel Seepage Control by the Interior Grouting Method, Bruce A. La Penta, Reuben H. Karol and Charles H. Arnold, (Grouting, Soil Improvement and Geosynthe-ics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.

Alkali-Silica Reactivity: An Overview of a Concrete Durabilty Problem, D. Stephen Lane, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p231-244.

Borosilicate Glass (a,n) Sources Used With Origen-Type Calculations, O.W. Hermann and R. Salmon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1272-1280.

Dissolution Rates of As-Received and Partially Oxidized Spent Fuel, W. J. Gray and L. E. Thomas, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1458-1464

First-Order Model for Durability of Hanford Waste Glasses as a Function of Composition, Pavel R. Hrma, Gregory F. Piepel, Michael J. Schweiger and Donald E. Smith. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1236-1243.

Geochemical Evidence for Waning Magmatism and Polycyclic Volcanism at Crater Flat, Nevada, Frank V. Perry and Bruce M. Crowe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2356-2365.

Geochemical Model for <sup>14</sup>C Transport in Unsaturated Rock, Richard B. Codell and William M. Murphy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1959-1965.

The International CHEMVAL Project: Verification and Validation of Geochemical Models, D. Read and T. W. Broyd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1421-1428.

Modeling of Localized Electrochemistry Within Occluded Regions, Maureen J. Psaila-Dombrowski, Alan Turn-bull and Ronald Ballinger, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1687-1694.

New Technique to Evaluate the Surface Degradation of Cementaneous Matrix, Takayuki Amaya and Kazunori Suzuki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1670-1675.

Occurrence of Metallic Phases in Spent Nuclear Fuel: Sig-nificance for Source Term Predictions for High-Level Waste Disposal, English C. Pearcy and Hersh K. Manaktala, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p131-136.

Partitioning of Aqueous High-Level Wastes: State-of-the-Art Technology, Wallace W. Schulz, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1718-1723.

Passive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Concretes, Michael A. Taylor, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl-12.

and stein Sutre, ed., 1992, p. 112.

Strontium Isotope Geochemistry of Calcite Fracture Fillings in Deep Core, Yucca Mountain, Nevada—A Progress Report, Z. E. Peterman, J. S. Stuckles, B. D.

Marshall, S. A. Mahan and K. Futa, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),

1021-118 p1582-1586.

vance riyurates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, R. J. Finch and R. C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p332-337. Uranyl Oxide Hydrates and Uraninite Corrosion: Rele

## Chemical spills

62

Chemica spuis
Model Development for Operational Use to Help Spill
Combating and Sea Rescue, Heimo Vepaš, Erki Alasaarela and Juha Sarkkula, Estuarine and Coastal
Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p149-156.

Removal of VOCs and TEL in Iron-Rich Groundwaters, James E. Rumbo, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p116-121.

Treatment of Contaminated Groundwater Using Chemi-cal Oxidation, Mark E. Zappi, Beth C. Fleming and M. John Cullinane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), Jennings, ed

## Chemical wastes

Implementing a Wellhead TCE Removal Project in Red-lands, Richard Corneille and Michael Huffstutler, En-vironmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p315-320.

Water, Endangered Ecosystem: Assessment of Chemical Pollution, Werner Stumm, EE July/Aug. 92, p466-476.

Adding Up Admixtures, Paul Tarricone, CE May 92, p48-51.

Assessing CullI) Speciation and Transport in the New York Bight, A. B. M. Badruzzaman and Wu-Seng Lung. (Estuarine and Coastal Modeling, Malcolm L. Spauld-ing, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p476–488.

Chemical Analysis in Space Exploration: A Lunar-based Chemical Analysis Laboratory (LBCAL), Mitchell K. Hobish, Charles W. Gehrke, Cyril Ponnamperuma and Robert W. Zumwalt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p565-575.

Concreting at Subfreezing Temperatures, Charles J. Korhonen, Edel R. Cortez and Brian A. Charest, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p382-397.

Distant Look at Pollution, CE May 92, p13-14.

Distant Look at Founding, Venn and Page 19, pp. 3-19.
Evacuation Modeling Near a Chemical Stockpile Site, Donald E. Newsom, Marc A. Madore and Robert T. Jaske, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p180-184.

Modeling the Pathways of Nonconservative Substances in Estuaries, Tamara M. Wood and António M. Baptista, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p280-291.

Cheng, ed. and craig Swamson, ed., 1992), p.200-291.

NCASI Experiments Related to Validation of Sediment-Water Column Exchange Models for Hydrophobic Chemicals, Steven W. Hinton and Ray C. Whittemore, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.387-389.

# Chesapeake Bay

Chesapeake Bay Field Modeling and Monitoring Projects, Wesley E. Coleman, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p221-233.

Chlorination/Dechlorination and Post Aeration Key Operating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p623-627.

Full Scale Side-By-Side Testing of BNR Technologies, Bruce B. Burns, Angela S. Essner, Dave L. Montgom-ery, Amarjit Sokhey and Manu A. Patel, (Environmen-tal Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 230.35 p30-35.

Managing Water Supply with Aquifer Storage and Recovery, Thomas J. Buchanan and Margaret A. Ibison, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p426-431.

Modeling Nutrient Loadings from Croplands in the Chesapeake Bay Watershed, Anthony S. Donigian, Jr. and Avinash S. Patwardhan, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 217, 2017.

Nitrogen Removal at Baltimore's Back River WWTP, Robert J. Andryszak, Amarjit S. Sokhey, Jaswant S. Dhupar and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p617-622.

tions, F. Pierce Linaweaver, ed., 1992), pol?-622.

Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwilo and Rudy S. Chow, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl 2-17.

Prosphorus Removal by Automatic Backwash Filters at Back River WWTP, George G. Balog, Manu A. Patel, Thomas N. Lash and Christian Davies-Venn, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p24-29.

1992, p24-27.
Usefulness of Low-Cost Watershed Monitoring: A Case Study, James G. Turek and David W. Blaha, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p712-717.

Chicago

Chicago

Advanced Technology Applications in Chicago-Area
Freeway Traffic Management Program, Joseph M.

McDermott, TE May/June 92, p451-456.

Deep Cuts and Ground Movements in Chicago Clay,
Richard J. Finno, (Excavation and Support for the
Urban Infrastructure, T. D. O'Rourke, ed. and A. G.

Hobelman, ed., 1992), p119-143.

The Great Chicago Flood of 1992, Randall R. Inouye and Joseph D. Jacobazzi, CE Nov. 92, p52-55.

People Mover Helps Tame O'Hare Tangles, CE Dec. 92, p10.

Waterfall Aeration Works, Renso Gasparotto, CE Oct. 92, p52-54.

Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p912-915.

China, People's Republic of
A Competitive Framework for Evaluating the Economic
Benefits of Port Improvements, Ira Hirschman and
Ogden Beeman, (Ports '92, David Torseth, ed., 1992),
p563-576.

The Design and Construction of Shuikou Project RCC Diversion Wall, Ma Zhong Hang, Cai Heming and E. B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

Flood Control Experiences in China and 1991 Flood Dis-aster, Daniel J. Gunaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 995-5790.

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.
Research/Application of System Engineering to Water Resources Systems, Dingzhong Dai, Xueren Lu, Yuan-yu Guo and Xinyi Xu, WR May/June 92, p337-349.

Reservoir Sedimentation. I: Delta and Density Current Deposits, Jiahua Fan and Gregory L. Morris, HY Mar. 92, p354-369.

Reservoir Sedimentation. II: Reservoir Desiltation and Long-Term Storage Capacity, Jiahua Fan and Gregory L. Morris, HY Mar. 92, p370-384.

Shape Optimization of Arch Dams for Static and Dynamic Loads, Bofang Zhu, Bin Rao, Jinsheng Jia and Yisheng Li, ST Nov. 92, p2996-3015.

Chloride Binding Capacity in Cement-Fly-Ash Pastes, O.
A. Kayyali and M. Sh. Qasrawi, MT Feb. 92, p16-26.
Estimation of Chloride Diffusion Coefficient and Tortuosity Factor for Mudstone, F. S. Barone, R. K. Rowe
and R. M. Quigley, GT July 92, p1031-1046.

Forecasting Instabilities in Groundwater Parameters, Fethi Ben-Jemaa and Miguel A. Mariño, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p90-95.

Rebar Corrosion in MgSQ4 Solution, Mohammad Shamim Khan and Abdul-Hamid J. Al-Tayyib, MT Aug. 92,

p292-299.

Rehabilitation of Chloride Damaged Concrete, Christo-pher P. Hodges, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491.

Sprayed-Zinc Galvanic Anodes for the Cathodic Protecition of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p732-747.

Chlorination

Chlorination/Dechlorination and Post Aeration K.y. Op-erating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p623-627.

tions, F. Pierce Linaweaver, ed., 1994), p623-021.

Chlorine
Oxidation of Bromide by Hypochlorous Acid in Aqueous
Solutions: Stoichiometry and Kinetics, N. Phillip and
V. Diyamandoglu, Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p63-46-59.

Toward a Low-Emissions Wastewater Treatment Plant,
Albert B. Pincince, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p1-6.

Chlorophyll
Flux of Metals Between Sediment and the Water Column,
N. S. Simon and K. O. Dennen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik,
4 (202), 2300, 301. ed., 1992), p390-391.

Cleaning Up Chromium, W. Scott McKinley, Randy C. Pratt and Loren C. McPhillips, CE Mar. 92, p69-71.

Chromatographic analysis
Forensic Analysis Techniques for Joint Sealants, Rogers
T. Graham and Larry N. Lynch, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p404-414.

Gas-Transfer Measurements Using Headspace Analysis
of Propane, John R. Thene and John S. Gulliver, EE
Nov./Dec. 90, p1107-1124.

Circulation

A Coastal-Ocean Hindcast/Forecast Model, Ping Chen, Yan-H. Zhang, Kwang-W. You and Lie-Yauw Gey, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992, p.175-187.

Effects of Wind on Circulation in Los Angeles-Long Beach Harbors, William C. Seabergh and S. Rao Vernulakonda, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., p.551-563.

Raiph Cheng, ed. and Craig Swanson, ed., 1992), p.551-563.

Raiph Cheng, ed. and Craig Swanson, ed., 1992), p551-563.

Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

Frontal Dynamics and Circulation of the Upper Layer of a Fjordsystem with Complicated Topography, Harald Svendsen, Susanne R. Mikki and Lars G. Golmen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p252-267.

Hurricane Camille Shelf Wave Simulation Using a Numerical Ocean Circulation Model, Le Ngoc Ly and Lakshmi Kantha, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p586-593.

Lumped Parameter Model for the Dynamics of the Pul-

cu., 1972, pos-393.
Lumped Parameter Model for the Dynamics of the Pulmonary Circulation, B. B. Lieber, Z. Li and B. J. B. Grant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p848-851.

Methodology for Validation of a Tampa Bay Circulation Model, Kurt Hess and Kathryn Bosley, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p83-94.

Modeling 3-D Circulation Using the DSS Technique, R. A. Luettich, Jr., S. Hu, J. J. Westerink and N. W. Scheffner, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p632-643.

Modified Adjoint Method for Inverse Eddy Viscosity Estimation for Use in Coastal Circulation Models, John E. Richardson and Vijay G. Panchang, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p733-745.

Semi-Implicit Finite Difference Model for Three-Dimensional Tidal Circulation, Vincenzo Casulli and Ralph T. Cheng, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p620-631.

Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Carelland Control and Mixing in the New York Carelland Circulation and Mixing in the New York Carelland Control and Mixing in the New York Carelland Control and Mixing in the New York Carelland Carelland Control and Mixing in the New York Carelland C

ed., 1992), p620-631.

A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, Kwang-W. You, Lie-Yauw Oey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p453-465.

Two-Dimensional Circulation Modeling of the Pamlico River Estuary, North Carolina, G. L. Giese and Jerad D. Bales, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p607-619.

Ralph Ch p607-619.

Model for Biological Reactors Having Suspended and At-tached Growths, Chi-Yuan Lee, EE Nov./Dec. 92,

Wave Front Behavior in Adsorption Reactors, Federico Vagliasindi and David W. Hendricks, EE July/Aug. 92, p530-550.

Effect of Drought on Urban Water Supplies. I: Drought Analysis, David M. Frick, Dennis Bode and Jose D. Sa-las, HY June 90, p733-753.

Traffic Impact Studies—Current Practices from Cities Perspective, Daniel B. Rathbone, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., well, ed., Nagui 1992), p109-113.

1992, p109-11.
Using Geographic Information Systems for Traffic Control Inventory Management, Gary S. Spring, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1-8.

Civil engineering 16 Projects Nominated for 1992 OCEA, CE Apr. 92, p68. ASCE Newsletter Needs Reviewers, CE June 92, p11.

ASCE Should Have a Construction Safety Committee, C. E. Jackson, Jr., El Jan. 92, p56-59.

ASCE's Computing Newsletter Covers All Bases, CE Oct. 92, p68.

92, p68.
CE Summiteers Offer Views on Problems Troubling to Profession, CE Aug. 92, p66-67.
CERF Will Measure U.S. R&D Trends, CE Aug. 92, p8.
Challenges of The Changing Profession, Slobodan P. Simonovic, El Jan. 92, p1-9.
Civil Engineering Curriculum Computer Integration 1992, Robert M. Henry, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1226-1233.
A Comparison of Geographical Information Systems Symposium, Comparison of Geographical Information Systems (1992), A Comparison of Geographical Information Systems (1992), A Comparison of Geographical Information (1992), A Comparison (

pl.226-l.233.

A Comparison of Geographical Information Systems, Carl E. Kurt, Khurshid Mohyuddin and Bo Guo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl.7-24.

Computer Vendor-User Relationships, Constantine N. Tonias and Elias C. Tonias, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl007-1014.

Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Ooodno, ed. and Jeff R. Wright, ed., 1992, 0-87262-869-8, 1260pp.
Computing in Civil Engineering: Current Trends and Future Directions, Nelson C. Baker and Glenn J. Rix, El

ure Directions, Netson C. Baker and Glenn J. Rix, El Apr. 92, p139-155.
Educating Engineers for the Future: Two Views, Richard H. McCuen and Andrew Olmstead, CE Feb. 92, p6,10. Ethics and Pitfalls, Jack P. Norris, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1101-1104.

1992, p1101-1104.

Experiences in Using C++ to Develop a Next Generation Strong Shock Wave Physics Code, James S. Peery and Kent G. Budge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p527-534. Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992, 0-87262-892-2,

305pp.
General Williams Named Chief of Army Corps of Engi

General Williams Named Chief of Army Corps of Engineering Process, Ne Oct. 92, pd. Integrated GIS Solutions with Civil Engineering Projects, Jerry W. Williams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p328-331.

p326-331.
Knowledge Acquisition in Civil Engineering, Tomasz Arciszzewski, ed. and Lewis A. Rossman, ed., 1992, 0-87262-864-7, 232pp.
Lehigh's Fritz Laboratory is Civil Engineering Landmark,

NE Oct. 92, p15.
Limited View Limits Engineers (ltr), Ralph M. Hansen, CE Feb. 92, p32,35.

CE Feb. 92, p32,35.

Military Leaders and Civil Engineers—An Air Force Academy Challenge, J. L. Brickell, K. J. Knox, B. L. Miller and B. D. Bryant, El July 92, p240-249.

Mixed Bag for CEs in Bush 1993 Budget, Casey Dinges, CE Apr. 92, p108.

The Most Dangerous Technology Ever Built, CC Oct. 92,

CE Apr. 92, p108.
The Most Dangerous Technology Ever Built, CC Oct. 92, p8,12.
Multimedia in the Civil Engineering Classroom, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p245-252.
National Endowment of the Arts Honors Engineering Projects, CE May 92, p16-17.
Neural Networks and their Applicability within Civil Engineering, James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1155-1162.
Optimal Discretization of Random Fields for SFEM, Chun-Ching Li and A. Der Klureghian, (Probabilistic Mechanics and Structural and Geotechnica Reliability, Y. K. Lin, ed., 1992), p29-32.
Parallelism, Object Oriented Programming Methods, Portable Software and C++, I. G. Angus, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p506-513.
Postscript on 1992 National Engineers Week in D.C., CE

ed., 1992), p506-513.

Postscript on 1992 National Engineers Week in D.C., CE Aug. 92, p67-68.

Pricing of Services, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1089-1094.

Probabilistic Mechanics in Civil Engineering, James T. P. Yao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p42-50.

Professionalism and Marketing of Civil Engineering Profession, John A. Alexander, El Jan. 91, p10-20.

Progressive Integration of the Personal Computer Into an Undergraduate Civil Engineering Curriculum, Thomas A. Lenox and Terry D. Hand, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p65-72.

1992), p65-72.
Real-Time Integrated Computer-Aided Instruction, Jorge A. Vanegas, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p81-88.
Space Civil Engineering Option—A Progress Report, Marvin E. Criswell and Willy Z. Sadeh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2136-2146.

Two Paradigms for OOP Models for Scientific Applications, T. J. Ross, J. P. Morrow, L. R. Wagner and G. F.
Luger, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno,
ed. and Jeff R. Wright, ed., 1992), p335-542.
The Use of Computers as an Aid to Modular Learning in
Civil Engineering, Richard N. Palmer and Gregory R.
Miller, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno,
ed. and Jeff R. Wright, ed., 1992), p364-367.
Use of G1S for Resource Management in Hong Kong, Jan
R. Selwood and Peter G. D. Whiteside, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p942-949.
Using Simulation Software to Build Conceptual Models

Using Simulation Software to Build Conceptual Models in Civil Engineering, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244.

Civil engineers

Civil engineers
The Army Avistion Team from a Military Civil Engineer's Perspective, Paige E. Johnson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p72-108.
ASCE 1991 Salary Survey: Summary of Findings, Committee on Employment Conditions and Professional Activities Staff, El Apr. 92, p167-189.
ASCE Celebrates Its Finest, Elevating Seven to Honorary Membership, NE Dec. 92, p3.

Can Civil Engineers Make the Difference by Involvement in the Political Process? Karen S. Irion, El Oct. 89, p441-445.

pasi-14-3.
Civil Engineers Shaping Society: Our Social Responsibilities, Dennis A. Randolph, El Jan. 92, p10-15.
Conference Dedication to Jerome M. Raphael, Eric B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p1-4. Debris Torrents and Professionai Responsibilities, S. O. Russell, El Jan. 90, p49-55.

Russen, E.I Jan. 30, p49-25.
Depositions and Trial Testimony, A Positive Experience?
Robert W. Day, El Apr. 92, p129-131.
Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163.
The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.
Engineer Elegence of Development Services and Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Engineer Pioneered Daring Docks During WWII (ltr), Eugene H. Harlow, CE June 92, p38.
Engineer Returns to Roots to Lecture School Children, NE Apr. 92, p16.

Fordice Elected Mississippi Governor, Card Joins President Bush's Cabinet, NE May 92, p16.

Kennedy, Hydraulics Expert, Dead at 57, NE Feb. 92, p4. Meet John Q. Member: Introducing Someone Who May be Very Much Like You, NE June 92, p1,4.

New Ethical Standards Issued for Federal Employees, NE Sept. 92, p3.

Practitioners in Classroom: Viable Tool in Civil Engineering Education, James W. Poirot, ME Oct. 90, p388-393.

Professionalism and Marketing of Civil Engineer fession, John A. Alexander, El Jan. 91, p10-20.

Research Needs Related to Forensic Engineering of Con-structed Facilities, Julie Mark Cohen, W. Gene Corley, Ping K. Wong and John M. Hanson, CF Feb. 92, p3-11.

Responsibility is the Key (ltr), John K. Bright, CE Aug. 92, p29-30.

Visioning: The Future of Civil Engineering, C. R. "Chuck" Pennoni, El July 92, p.221-233.

Women Engineers Still Face Career Bars, New Study Shows, NE Oct. 92, p.3.

Criticality Safety and Shielding Design Issues Related to Transport Cask Design, Alan H. Wells, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2151-2155.

p2151-2153.
Extended-Life Nuclear Waste Package Utilizing Redundant Corrosion/Containment Barriers, F. E. Goodwin and R. E. Westerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1681-1686.

French High-Level Waste Management Research and Development Program, J. P. Moncouyoux and C. G. Sombret, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409.

Commutee, 1992, p2-00-207.
International Status of Dry Storage of Spent Fuels, K. J. Schneider, S. J. Mitchell and A. B. Johnson, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p1159-1165.

1992), p1139-1105.

Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, Loai El-Gazairty, Barry Goodno and James Craig, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p896-904.

Probabilistic Assessment of Spent-Fuel Cladding Breach, H. Foadian, Y. R. Rashid and K. D. Seager, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

1992), p1018-1025.

1372A, p.1016-1025. Reactivity End-Effects Estimates Using A K<sub>∞</sub> Perturba-tion Model, Charles R. Marotta, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2165-2173.

Abandoned Contract Can Prompt Liquidated Damages,

CE Mar. 92, p30.

CM Launches 'Pre-Emptive Strike' in Bid Documents, CE June 92, p18,20.

Contractor Can't Be Held Responsible for Delays, CE Sept. 92, p32. Court Broadens Implied Warranty Definition, CE Oct.

92, p28. Engineering Firm Not Liable for Contractor, CE Mar. 92,

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Only Taxpayers Can Question Bids, CE Dec. 92, p28. Protecting Engineer Against Construction Delay Claims: NDC, David M. Leishman, ME July 91, p314-333.

Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

Site Event Advisor: Expert System for Contract Claims, James E. Diekmann and Knut Gjertsen, CP Oct. 92, p472-479.

Steering Clear of Tort Claims, Daniel S. Turner and Jo-seph D. Blaschke, CE July 92, p54-56.

Subcontractor Is Surety Bond Claimant, CE Dec. 92, p28. SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Tort Reform and Design Professional, Dennis R. Schapk-er, El July 90, p258-265.

Clamps

An Analytical Solution to a Clamped Cylindrical Panel with Anti-Symmetric Angle-Ply Laminations, Humayun R. H. Kabir and J. B. Kennedy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Niedzwecki, ed., 1992), p1055-1058.

Boundary-Continuous Fourier Solution for Clamped Mindlin Plates, Humayun R. H. Kabir and Reaz A. Chaudhuri, EM July 92, p1457-1467.

Celanese Wastewater Treatment Plant Upgrade, William R. Gluck, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p281-286.

Flow Distribution in a Stacked Clarifier, M. Pad-manabhan, T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, Environmental Engineering: Saving a Threatend Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633.

Linaweaver, ed., 1992), po.28-033.
Influences of Density on Circular Clarifiers with Baffles, Siping Zhou, J. A. McCorquodale and Z. Vitasovic, EE Nov./Dec. 92, p829-847.
Modeling and Pilot-Scale Experimental Verification for Predenitrification Process, J. Hamilton, R. Jain, P. Antoniou, S. A. Svoronos, B. Koopman and G. Lyberatos, EE Jan./Feb. 92, p38-55.

Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu. A. Patel and Burton D. Sklar, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.275-280.

Cassification
An Acoustic Impedance Method for Subbottom Material Characterization, Richard G. McGee and Robert F. Ballard, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1030-1035.

1033. Classification of Jointed Rock with Emphasis on Grouting, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p449-460.

13721, 1943-401.
Classifying Process Control Information, Victor E. Sanvido and John Messner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p340-347.

p.340-347.
Construction Automation Work Classification, Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.500-505. Evaluation and Control of Collapsible Soils, Adman A. Basma and Erdil R. Tuncer, GT Oct. 92, p.1491-1504.

Evaluation and Control of Collapsible Soils, Adnan A. Basma and Erdil R. Tuncer, GT Oct. 92, pl 491-1504. Framework of a Knowledge-Based Estimate Classification System, Irishad U. Ahmad and Syed T. Rahman, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p961-974.
Hydraulic and Geomorphic Classification of the Upper Mississippi River System: Pilot Study of Three Pools, Nani G. Bhowmik and Renjie Xia, (Hydraulic Engineering, Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p666-671.
INFO: An Information Framework for Facility Operators, James P. Beckett and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p57-64.
Small Stream Classification—A Process Based Approach, Jeffrey B. Bradley and Peter J. Whiting, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jeanings, ed. and Nani G. Bhowmik, ed., 1992), p695-700.
Survey of and Classification Criteria for Most Commonly Used Groundwater Models, Lakshmi N. Reddi, C. Harold Emmett, Daniel E. Medina and R. Lee Peyton, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawawer.

(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p575-580.

Trenchless Excavation Construction Methods: Classifica-

Irenchess Excavation Construction Methods: Classifica-tion and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536. Vehicle Classification Using Infrared Image Analysis, Yean-Jye Lu, Yuen-Hung Hsu and Xavier Maldague, TE Mar/Apr. 92, p223-240.

Clay liners

Cause and Mechanism of Failure Kettleman Hills Land-fill B-19, Phase IA, R. John Byrne, J. Kendall and S. Brown, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1188-1215. Hydraulic Conductivity of Three Geosynthetic Clay Liners, Paula Estornell and David E. Daniel, GT Oct. 92, p1592-1606.

Hydraulic Conductivity of Three Landfill Clay Liners, Mark E. Gordon, Paul M. Huebner and Thomas J. Miazga, GT Aug. 89, p1148-1160. Landfill-Cover Conflict, Teresa Austin, CE Dec. 92, p70-

Lessons Learned from Compacted Clay Liner, Bill R. Eisbury, David E. Daniel, Gregory A. Sraders and David C. Anderson, GT Nov. 90, p1641-1660.

Clay shales

Clay shales
FE Analysis of Time-Dependent Instability of Cut Slopes
in Clay Shale, Nobuyuki Yoshida and Toshihisa Adachi, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p429-444.

Clay soils

Pipeline Storm Behavior on Clay Soils, Derek V. Morris, Tony S. Yen, Wayne A. Dunlap and James R. Hale, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p560-570.

Probabilistic Particle Related Constitutive Model for Clayey Material, Mohammad Djavid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p471-474.

Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p791-802.

Modeling Anisotropy of Clays at Critical State, S. The-vanayagam and J.-L. Chameau, EM Apr. 92, p786-806.

Better Cover-Ups, Robert M. Koerner and David E. Dan-iel, CE May 92, p55-57. iet, CE May 92, p.35-57.
Case History Evaluating Field Vane Correction Factors, W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani and Henry T. Taylor, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.737-755.

CERF Cosponsors Lime Columns Field Study, NE Aug. 92, p5.

Comparison of Field and Laboratory Residual Strengths, Timothy D. Stark and Hisham T. Eid, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-

Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dams—James L. Sherard Contribu-tions, Sukhanander Singh, ed., 1992), p533-554.

Critical Reappraisal of Colloidal Activity of Clays, N. S. Pandian and T. S. Nagaraj, GT Feb. 90, p285-296.

Cyclic Behavior of a Deepwater Normally Consolidated Clay, Rathindra N. Dutt, Earl H. Doyle and Richard S. Ladd, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p546-559.

Hudspeth, ed., 1992), p346-399.
Deep Cuts and Ground Movements in Chicago Clay, Richard J. Finno, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143.
A Design Method for Reinforced Clay Embankments on Soft Foundations, Glen A. Roycroft, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1481-1409.

The Design of a Reclamation Scheme by Preloading, S. Ossama Mazen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1019-1030.

Design of the Charter Oak Bridge Embankments, Alec D. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p721-736.

Development of Strain During Monotonic Shear of Soft Clay, Sam Frydman and Mark Talesnick, GT May 92, p704-725.

Diffuse Double-Layer Equations in SI Units, Albert T. Yeung, GT Dec. 92, p2000-2005.

Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, Siew-Ann Tan, Kee-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p209-228.

Yew Yong and Seng-Lip Lee, GT Feb. 92, p.209-228. Earthflow Evaluation and Control: A Case History, Mi-chael R. Thomas and Alan L. Kropp, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864. Effect of Lateral Stress on CPT Penetration Pore Pres-sures, J. P. Sully and R. G. Campanella, GT July 91,

sures, J. P. S p1082-1088.

Effect of Soil Plasticity on Cyclic Response, Mladen Vucetic and Ricardo Dobry, GT Jan. 91, p89-107. Effective Cohesion for Compacted Clay, Robert W. Day, GT Apr. 92, p611-619.

Effects of Freezing on Hydraulic Conductivity of Compacted Clay, Woon-Hyung Kim and David E. Daniel, GT July 92, p1083-1097.

troosmotic Contaminant-Removal Processes, Burton Segall and Clifford J. Bruell, EE Jan./Feb. 92, p84-

Electroosomotic Removal of Gasoline Hydrocarbons and TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

and Matthew T. Walsh, EE Jan. Feb. 92, p68-83.
Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contibutions, Sukhanander Singh, ed., 1992), p120-203.
An Embankment on Soft Clay With an Adjacent Cut, Walter Steiner, Richard Metzger and W. Allen Marr, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720.

Empirical Estimation of Double-Layer Repulsive Force between Two Inclined Clay Particles of Finite Length, Ning Lu and A. Anandarajah, GT Apr. 92, p628-634.

Equations for Compression Index Approximation, A. W. N. Al-Khafaji and O. B. Andersland, GT Jan. 92. p148-153.

Filters for Silts and Clays (Paper introduced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992). p384-402

Generalized Creep and Stress Relaxation Model Clays, Ronaldo I. Borja, GT Nov. 92, p1765-1786.

Hydraulic Conductivity of Landfill Liners Containing Benzyltriethylammonium-Bentonite, James A. Smith, Pamela M. Franklin and Peter R. Jaffé, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p186-

Hydraulic Fracturing in Low Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, (Em-bankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p94-119.

Hydrocompression Settlement of Deep Fills, Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, p1536-1548.

Identification and Nature of Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan and Rey S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p285-300.

Interaction of Inorganic Leachate with Compacted Pozzolanic Fly Ash, Tuncer B. Edil, Linda K. Sandstrom and P. M. Berthouex, GT Sept. 92, p1410-1430.

Inverse Analysis of Geotechnical Parameters on Improved Soft Bangkok Clay, Dennes T. Bergado, Apollo S. Enriquez, Casan L. Sampaco, Marolo C. Alfaro and A. S. Balasubramaniam, GT July 92, p1012-1030.

Kinematically Unconstrained Compression of Soft Clay, Richard J. Finno and Yongbeun Rhee, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p143-

Mechanisms of Strength Loss in Stiff Clays, Timothy D. Stark and J. Michael Duncan, GT Jan. 91, p139-154.

Mitigation of Acidic Mine Drainage: Engineered Soil Barriers for Reactive Tailings, Abdel-Mohsen O. Mohamed, Raymond N. Yong and Boon K. Tan, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462.

Modeling Anisotropy of Clays at Critical State, S. The-vanayagam and J.-L. Chameau, EM Apr. 92, p786-806. vanayagam and 1-L. Chameau, Ewi Apt. 24, p760-800.
On the Response of Earth Dams Subjected to Earthquake
Fault Rupture, Jonathan D. Bray, Raymond B. Seed
and H. Bolton Seed, (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p608-624.
Bibbol Tet for Identifician Disregaries Scile (Pages intro-

Pinhole Test for Identifying Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284.

Piping in Earth Dams of Dispersive Clay (Paper intro-duced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, (Embankment Dams— James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p55-93.

Preliminary Design for NATM Tunnel Support in Soil, Eric Leca and G. Wayne Clough, GT Apr. 92, p558-

Seepage Control in Kaolinite Clay with Simulated Cracks, C. Vipulanandan and M. Leung, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1054 1066.

1066.

Single-Hardening Model with Application to NC Clay, Poul V. Lade, GT Mar. 90, p394-414.

SOA: Large Strain Consolidation Predictions, F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243.

Soft Clay Subgrade Stabilization Using Geocells, S. Y. Mhaiskar and J. N. Mandal, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1092-1103.

Some Engineering Problems with Dispersive Clays (Paper introduced by Lorn P. Dunnigan), J. L. Sherard, L. P. Dunnigan and R. S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p301-311.

Stability Analysis of Reinforced Embankments on Soft

Stability Analysis of Reinforced Embankments on Soft Soils, Shenbaga R. Kaniraj and Hasan Abdullah, GT Dec. 92, p1994-1999.

Dec. 92, p1994-1999.
Stability and Closure Design for a Landfill on Soft Clay and Peat, Richard A. Mitchell, Sybil E. Hatch and Ronald A. Siegel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p685-704.
Stability Evaluation During Staged Construction, Charles C. Ladd, GT Apr. 91, p540-615.
Stability of the Olga C Test Embankment, J. G. Lavallée, G. St-Arnaud, R. Gervais and Y. Hammamji, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1006-1021.

p1006-1021

Stabilized Active Clay by Sand Admixture, Pat T. Leelani, Maen M. Shaar and Phil V. Compton, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1042-1053.

Stabilizing Compacted Clay Against Chemical Attack, Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567.

Strength Parameters for Cut Slope Stability in "Marine" Sediments, J. L. M. Clemente, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p865-875.
 Stress Ratio Effects on Collapse of Compacted Clayey Sand, Evert C. Lawton, Richard J. Fragaszy and James H. Hardcastle, GT May 91, p714-730.

ress-Strain-Strength Responses of Compressible Chica-go Glacial Clays, Richard J. Finno and Choong-Ki Chung, GT Oct. 92, p1607-1625.

Chung, GT Oct. 92, p1607-1625.

A Study of Slope Stability Analysis, R. J. Deschamps and G. A. Leonards, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p267-291.

Subsurface Characterization and Design of an Ash Landfill on Varved Clays, Siamac Vaghar, Stanley M. Bemben and Markus Walbaum, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803.

Swell versus Saturation for Compacted Clay, Robert W. Day, GT Aug. 92, p1272-1278.

A System for Measuring Moisture Transients in Clay-

Day, G1 Aug. 92, p1272-1278.

A System for Measuring Moisture Transients in Clay-Based Barrier Materials, A. W. L. Wan, B. H. Kjartanson, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1122-1128.

Total Stress Analysis of Cantilever Sheetpiling in Layered Clay, Jay S. DeNatale and German A. Ibarra-Encinas, GT July 92, p1064-1082.

Of July 92, p1009-1002.
Undrained Analysis of Slopes Based on Effective Stress Methods, John F. Peters, Chris L. Saucier and Oswald Rendon-Herrero, (Stability and Pei)-wannec of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed. 1992), p493-505.

Unified Approach to Ground Improvement by Heavy Tamping, Kwang Wei Lo, Peng Lee Ooi and Seng-Lip Lee, GT Mar. 90, p514-527.

Lee, G.I. Mar. 90, p514-527.
Use of a Method Specification For In Situ Compaction of Clay-Based Barrier Materials, B. H. Kjartanson, N. Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1129-1136.

Yielding of Mexico City Clay and Other Natural Clays, J. A. Díaz-Rodríguez, S. Leroueil and J. D. Alemán, GT July 92, p981-995.

### Clean Water Act

FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarreta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p940-945.

Impact of Water-Quality Policies on Water Availability, Thomas S. Maddock, El Oct. 90, p333-344.

Piles Over Problems Sites, Issa S. Oweis and Edward M. Zamiskie, Jr., CE Apr. 92, p62-64.

Prospects for Clean Water Bill Hold Center Stage at Sev-enth Civil Engineering Summit, NE July 92, p1,4.

Statewide NPS Management Strategies, William Whip-ple, Jr., Vincent H. Berg and Eric H. Livingston, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p843-848.

# Water-Projects Bills, Casey Dinges, CE May 92, p122.

Using Computers to Competitive Advantage: Philosophy and Example, Philip C. Terry, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1105-1112.

## Climatic changes

The Army Corps of Engineer's (ACE) Interaction with the Mission to Planet Earth Initiative, Robert C. Lozar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2094-2103.

Climate Change and Water Management Flexibility, Lin-da L. Nash, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-522.

Climatic Change and Ensuing Risks Facing Water Re-sources Managers, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992). p52-66.

Diesel as Case of Consumer Choice in Alternative Trans-port Fuels, Joel R. Couse, EY Aug. 92, p95-108.

Effects of Sea-Level Rise on Bays and Estuaries, ASCE Task Committee on Sea-Level Rise and Its Effects on Bays and Estuaries, HY Jan. 92, p1-10.

Equity and International Agreements for CO<sub>2</sub> Containment, Dallas Burtraw and Michael A. Toman, EY Aug. 92, p122-135.

Global Change and Regional Water Resources, Nathan Buras, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p25-32.

Global Change: Geoengineering and Space Exploration, Lyle M. Jenkins, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2072-2081.

and Russell J. Miller, ed., 1992), p2072-2081.

Global Climate Change Effects on Water Quality, G. K. Meyer and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Secret of Solutions, Mohammad Karamouz, ed., 1992), p19-24.

Global Warming and Possible Effects on the Central and Southern Florida Project, James W. Vearil, (Water Re-sources Planning and Management: Saving a Threat-end Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), pl 3-18.

Hydrological Aspects of Droughts, A. R. Rao and A. Al-Wagdani, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p334-340.

An Innovative Institutional Arrangement Which Incorpo-rates the Risk Preferences of Water Users, Norman J. Dudley, (Risk-Based Decision Making in Water Re-sources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p174-199.

Meteorological Aspects of Drought, Richard L. Eddy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p329-333.

Responding to Public Opinion About Cumulative Long-Term Risks: Analysis and Communication of Risks from Climate Change and Hazardous Waste Sites, Robert E. O'Connor and Richard J. Bord, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p67-77.

saiv, eu., 1992), po1-77.
ssion Summary—Risk Associated With Climate
Change, Ronald M. North, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David
A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p343345.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., Resource—In Se 1992), p511-516.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p33-38.

Analysis of Evaporative Flux Data for Various Climates, Gabriel G. Katul, Richard H. Cuenca, Philippe Grebet, James L. Wright and William O. Pruitt, IR July/Aug. James L. Wri 92, p601-618.

92, p601-618.

Description of LANDSIM and Its Uses, Thomas S. Russell, Jr., Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitier and Michael E. Zientek, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941.

Applying Lessons from Extreme Environments to Solve Problems on Earth and in Space, Larry Bell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., Sadeh, ed., Stein 1992), p240-248.

1992b, p240-22.
The Drought Occurrence and Response Measures in Taiwan Area, 1991, Hong-Hsi Hsu and Jinn-Chuang Yang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p977-987.
Fountion, for, Evaporation Pan to Evaportensprication

Equation for Evaporation Pan to Evapotranspiration Conversions, Richard L. Snyder, IR Nov./Dec. 92.

Global Warming and Possible Effects on the Central and Southern Florida Project, James W. Vearil, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), p13-18.

Karamouz, ed., 1992), p13-18.
Longshore Sediment Transport Rate at Morro Bay, CA, James M. Kaihatu, Chris Andrassy and Edward F. Thompson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p615-631.
An Overview of the Yucca Mountain Global/Regional Climate Modeling Program, Robert P. Sandoval, Yugal K. Behl and Starley L. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1188-1195. p1188-1195.

p1188-1195.

Performance Assessment for a High-Level Waste Repository at Yucca Mountain, R. Shaw, R. F. Williams, J. C. Stepp and R. McGuire, (High Level Radioactive Waste Management Program Committee, 1992), p869-873.

Probability and Climatology of Droughts in the Western United States, Hugo A. Loaiciga, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p119-129.

Seven Legal Strategies to Cool Global Warming, Ray Jay

Karamouz, ed., 1972, p. 197-127.
Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p33-38.

Closed form solutions
Asymptotic Analysis of TLP Tendons and Risers, C.
Oran, EM Jan. 92, p56-73.

Effects of Dead Loads in Dynamic Plates, Hideo Takaba-take, ST Jan. 92, p34-51.

Exact Solution for General Torsion Problems Using Boundary Singularities, Omri Rand, EM Oct. 92, p2141-2147.

Random Vibration under Propagating Excitation: Closed-Form Solutions, Ronald S. Harichandran, EM Mar. 92, p575-586.

Stability Analysis of Reinforced Embankments on Soft Soils, Shenbaga R. Kaniraj and Hasan Abdullah, GT Dec. 92, p1994-1999.

Closed loop systems

In-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transpor-tation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-254.

Cloud modification

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, T. L. Clark, R. T. Bruintjes and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p606-611.

Cloud Seeding: The Engineering is Done, but What About Social Impacts? Maurice Roos, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p565-570.

The Present Status of Precipitation Enhancement by Cloud Seeding, Roelof T. Bruintjes, T. L. Clark and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p612-617.

Results from a Long-Term Winter Cloud Seeding Program in Utah, Don A. Griffith, John R. Thompson and Dan A. Risch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p559-564.

Targeting of Agl in a Utah Winter Orographic Storm, James A. Heimbach, Jr. and Arlin B. Super, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p553-558.

The Use of Sophisticated Engman, ed., 1992, p.535-358. The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, T. L. Clark, R. T. Bruintjes and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p606-611.

The Present Status of Precipitation Enhancement by Cloud Seeding, Roelof T. Bruintjes, T. L. Clark and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p612-617.

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, T. L. Clark, R. T. Bruintjes and W. D. Hall, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p606-611.

### Cnoidal waves

Remote Automated Wave and Water Level Monitoring System Deployed at Agat Harbor, Guam, David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p898-907.

Wave Exciting Forces on a Platform Fixed in Nonlinear Shallow Water Waves, Gregory S. Hook, Cheung H. Kim and Erick Huang, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p311-325.

Removal of Trihalomethane Precursors by Ferric Chlo-ride Coagulation, Anne Studstill and Appiah Amirtharajah, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p526-531.

TOC Removal by Coagulation and Softening, S. R. Qasim, S. A. Hasham and N. I. Ansari, EE May/June 92, p432-437.

Coal fired powerplants

Coal five powerpunns
A Multi-objective Criteria Analysis for Alternative Route
Planning, Amy Zlotsky, Michael P. Gutzmer and Guy
M. Evasco, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p474-479.

Durability Failure of a Concrete Block Port Pavement, Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl-15.

Technology—Key to Environmental Success, Pau (Ports '92, David Torseth, ed., 1992), p189-202.

Coal mine wastes

Coal Mine Waste Formation and Changes of Microstructure Under Artificial Salting, Krystyna M. Skarzynska and Maria Porebska, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p60-70.

Interface Friction of Polypropylene Straps, Meijiu Wei and Abdelmalek Bouazza, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1175-1187.

Hydrologic Considerations in Mined Land Reclamation, Patrick T. Tyrrell and Martin W. Stearns, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p383-388.

Search of Solutions, Ted Engman, ed., 1992), p383-388. Three-Dimensional Analytical Techniques for Assessing Overburden Toxicity as a Decision-Making Tool for Reclaimability Determinations, L. A. Parsons, K. Kirk and A. Wilhelm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p839-845.

Two Examples of Position Estimation, Gary Shaffer and Ben Motazed, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

Coal storage
Cement-Stabilized Soil for Coal Retaining Berms, Gary J.
Van Riessen and Kenneth D. Hansen, (Grouting, Soil
Improvement and Geosynthetics, Roy H. Borden, ed.,
Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p981-

Technology—Key to Environmental Success, Paul Soros, (Ports 92, David Torseth, ed., 1992), p189-202.

Coal-Gas Conundrum, Deborah English, Carol Whitlock and Dean Hargens, CE Mar. 92, p49-51.

Laptop Automated Navigation Aid Positioning System with Differential GPS, Charles F. Klingler, Michael R. Wroblewski and Scott Krammes, SU Nov. 92, p130-

The Application of Technology to Solving Practical Prob-lems, James R. Walker, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p908-917.

Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1037-1054.

Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, 0-87262-866-3, 1100pp.

Coastal Engineering—The Past!, The Present!, The Fu-ture? Omar J. Lillevang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1-11.

Cost Effective Risk Allocation for Coastal Engineering Projects, Robert J. Smith, (Coastal Engineering Prac-tice '92, Steven A. Hughes, ed., 1992), p1021-1036.

Diffusion and Dispersion in Coastal Waters, E. John List, Gregory Gartrell and Clinton D. Winant, HY Oct. 90, p1158-1179.

Environmental Impact Analysis of Coastal Projects, Jon T. Moore, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p952-957.

Experimental Research on Groyne Stability Under Very Oblique Wave Action, Antonio Baonza and José M. Berenguer, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p718-732. Fifth Time Around, as California Pier Reappears, CE July 92, p12.

Flow Field Induced by Sea Waves Over Brick-Pattern Ripples, G. Vittori, HY Sept. 92, p1241-1259. Model for Estimating Tidal Flushing of Small Embay-ments, Lawrence P. Sanford, William C. Boicourt and Stephen R. Rives, WW Nov./Dec. 92, p635-654.

Robust Approach to Wave Runup Calculation, Todd L. Walton, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p879-891.

Role of the Coastal Engineer in Civil Engineering Practice, ASCE Coastal Engineering Technical Committee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p918-934.

Sandbridge Virginia Oceanfront Seawall Arbitration Hearing: Some Lessons Learned for Coastal Engineers, David R. Basco, Robert A. Dolan and Carter Sinclair, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1003-1020.

Scour Around a Vertical Pile in Waves, B. Mutlu Sumer, Jørgen Fredsøe and Niels Christiansen, WW Jan./Feb. 92, p15-31.

Shoreline Profile of Stokes-Mode Edge Waves, Harry H. Yeh, WW Jan./Feb. 92, pi 12-116.

Tidal Model Using Method of Characteristics, Panayis-Fokion C. Matsoukis, WW May/June 92, p233-248.

Value Engineering in Coastal Design, Jack C. Cox, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p935-951.

Coastal environment

3-D Effects of Incipient Fluidization of Fine Sands in Unbounded Domains, Gerard P. Lennon, William MacNair, Richard N. Weisman and Jeffrey Lindley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p654-659.

G. Bnowmik, ed., 1992.), po34-639.
3D Hydrodynamic Model Validation Through Simulations of Dynamic Processes, Leif H. Slordal, Eivind A. Martinsen and Alan F. Blumberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p525-537.

Craig Swanson, ed., 1992.), po22-537.

3-D Modelling of Heat Discharge from Ul-Jin Power Plant into Coastal Waters of Korea East Sea, Young Jae Ro, Tae In Kim, Ha Keun Sung and Suk Woo Lee, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p501-512.

Cheng, ed. and Craig Swanson, ed., 1992), p501-512.

A Coastal-Ocean Hindcast/Forecast Model, Ping Chen, Yan-H. Zhang, Kwang-W. You and Lie-Yauw Oey, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ratph Cheng, ed. and Craig Swanson, ed., 1992), p175-187.

Controlling Nitrogen in Coastal Waters, Rosemary Monahan, Susan Beede, Joseph Costa and Bruce Rosinoff, CE Mar. 92, p56-59.

Creating Wetlands, Laurence J. Purcell and Thomas D. Johnson, CE Aug. 92, p36-37.

Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, 0-87262-861-2, 798pp.

Field Verification of a Wave-Induced Current Model, Jane McKee Smith, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p95-104.

Longshore-Transport Model for South Indian and Sri Lankan Coasts, P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-424.

Mobile-Bed Physical Model Tests for the 1992 Olympic Harbour, L. Moreno, C. Tamayo and J. Losada, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), 840-849.

Modeling Transport and Fate of Micropollutants in Coastal Waters, Tjitte Nauta, Hans van Pagee and Mindert de Vries, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p304-316.

Modelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, N. Jothi Shankar, H. F. Cheong and C. T. Chan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),

A Modified Adjoint Method for Inverse Eddy Viscosity Estimation for Use in Coastal Circulation Models, John E. Richardson and Vijay G. Panchang, Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), p733-745.

ed. and Craig Swanson, ed., 1992, p. 135-143.
Numerical Simulation of Tidal Flow in Shallow Water Bay by Finite Difference Method, Xiaoyong Zhan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p684-693.

A Predictive Model of the Currents in Cleveland Bay, Brian King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph\_Cheng, ed. and Craig Swanson, ed., 1992), p746-758.

p746-758.

Techniques for Visualization of Estuarine and Coastal Flow Fields, S. E. Rennie and J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alah Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p48-55.

Tide and Hurricane Storm Surge Computations for the Western North Atlantic and Gulf of Mexico, Joannes J. Westerink, Julia C. Muccino and Richard A. Luettich, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alah Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p538-550.

oastal management on trust in the Michigan Coast, J. Philip Keillor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p762-778. Design Manual for Coastal Fluidization Systems, Richard N. Weisman, Gerard P. Lennon and James E. Clausner, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p862-878.

Coastal morphology
Application of a Beach Plan Evolution Model in Sergipe,
Brazil, Otavio J. Sayao and K. C. Ander Chow, (Coastal Engineering Practice '92, Steven A. Hughes, ed.,
1992), p234-250.
Coastal Geomorphology and Sand Budgets Applied to
Beach Nourishment, Timothy W. Kana and F. David
Stevens, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p29-44.

Hughes, ed., 1992), p29-44.

Castal plains
H and Cas Tracers of Ground-Water Recharge, John
A. Izbicki, Robert L. Michel and Peter Martin, (Irrigation and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p122-127.
Adicarb Transport in the Coastal Plain of N. C. C. L.
Munster, R. W. Skagss, J. E. Parsons, R. O. Evans, J.
W. Gilliam and E. W. Harmsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424.
Water Quality Implications of Encapsulated Atrazine,
Adel Shirmohammadi, Timothy J. Gish and Raviraj
Vyravipillai, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman,
ed., 1992), p422-430.

Coastal processes
57 Years of Coastal Engineering Practice at a Problem
Inlet: Indian River Inlet, Delaware, Jeffrey A. Gebert,
Keith D. Watson and Augustus T. Rambo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),
p503-519.

psus-519.
Application of a Beach Plan Evolution Model in Sergipe,
Brazil, Otavio J. Sayao and K. C. Ander Chow, (Coastal Engineering Practice '92, Steven A. Hughes, ed.,
1992), p234-230.
ASCE Policy Group Counsels EPA on Coastal Pollution,
CE Mar, 92, p76-77.

CE Mar. 92, p/6-77.

Coastal Processes and Engineering on a Micronesian Fringing Reef, Stanley J. Boc, Jr., William J. Reynold and Jasmina M. Dobinchick, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p285-302.

Design and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p554-570.

Environmental Impact Analysis of Coastal Projects. Jon

ed., 1992), p324-370. Environmental Impact Analysis of Coastal Projects, Jon T. Moore, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p952-957. Numerical Beach Profile Modelling for Beachfill Projects, Robert B. Nairn and Keith J. Riddell, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p12-28.

Simple Conceptual Explanation of Down-Drift Offset In-lets, Scott L. Douglass, WW Mar./Apr. 91, p136-142.

Coastal structures
Application of Extremely Low Altitude Photogrammetry
for Monitoring Coastal Structures, Richard B. Davis
and Thomas R. Kendall, (Coastal Engineering Practice
'92, Steven A. Hughes, ed., 1992), p892-897.
Armor Stability on Submerged Breakwaters, Miguel Losada, Nobuhisa Kobayashi and Francisco L. Martín, WW
Mar./Apr. 92, p207-212.

Articulating Block Mat Revetment for Whaler's Village, Robert A. Nathan and David G. Cannon, (Coastal En-gineering Practice '92, Steven A. Hughes, ed., 1992), p268-284

p.208-284.

Beach Nourishment with Aragonite and Tuned Structures, Kevin R. Bodge, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.73-89.

Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice' '92, Steven A. Hughes, ed., 1992), p.1037-1054.

seign of a Mechanical Refuse Barrier, Edward J. Schmeltz, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p680-696.

Hugnes, ed., 1992, po80-096. Estimating Wave-Induced Bottom Velocities at Vertical Wall, Steven A. Hughes, WW Mar/Apr. 92, p175-192. Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.

eu., 1992), p. 30-643.
Nonlinear Shoaling and Impact of Waves on Coastal Structures, S. T. Grilli, M. A. Losada, F. Martin and I. A. Svendsen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedewecki, ed., 1992), p. 79-82.
Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p. 1055-1068.

An Overview of Segmented Offshore/Headland Breakwa-ter Projects Constructed by the Buffalo District, Thom-as Bender, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p170-188.

Rugues, 6t., 1926, pil-106.

Santa Barbara Harbor Assessment of Shoaling Frequency,
Russell H. Boudreau, Alan Alcorn and Stephen Fine,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p447-461.

countain Engineering Practice 92, Steven A. Frugnes, ed., 1992), p447-461.

Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-hsi Chu and Gilbert K. Nersesian, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.

Short Beach Nourishment Fill Performance on an Irregular Coatline, Douglas W. Mann, Lamont W. Curtis and Thomas H. Daniel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119.

Simulation of Nonlinear Wave Runup on Steep Impermeable Slopes, A. N. Williams, W. G. McDougal, S. Zhang and S. N. Stevenson, (Crüt Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p203-217.

Wave Runup on Smooth and Rock Slopes of Coastal Structures, Jentsje W. van der Meer and Cor-Jan M. Stam, WW Sept./Oct. 92, p534-550.

Coatings Conundrum, CE Dec. 92, p8.

Concrete Surface Treatments—A Selection Guide, P.

James Bruner, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482.

Ed., 1992, p. 94-945.

Impact of Fracture Coatings on the Transfer of Water Across Fracture Faces in Unsaturated Media, David P., Gallegos, Steven G. Thoma and Douglas M. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 738-745.

A New Look at Galvanized Bridges, Rita Robison, CE July 91, p52-55.

Safeguarding Steel, Rita Robison, CE Apr. 92, p50-53. Thermal Stresses in Bi-Coated Structures, Mauro Ferrari and Luca Lutterotti, EM Sept. 92, p1928-1938. Triple Coat Protects Marine Bridge Beams, CE Sept. 92, p94.

AASHTO Seismic Isolation Design Requirements for Highway Bridges, Ronald L. Mayes, Ian G. Buckle, Trevor E. Kelly and Lindsay R. Jones, ST Jan. 92, n284-304

ASME Pressure Vessel Code Application to Nuclear Waste Container Design, Mohamed B. Trabia and Mark Kiley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1244-1252.

Automatic Generation of Simulation Codes in Construc-tion, Ali Touran, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1050-

Bar Codes and Data Integration in Construction, George Stukhart, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p484-491. Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1037-1054.

p1037-1054.
Codification of Design Load Criteria Subject to Modeling Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007.
Design Codes for Lunar Structures, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1-12.
Design Considerations for Using Adhesives in Shem Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

Design Engineer/Contractor Bankruptcy: Considerations for Debtor and Creditors, Jeffrey S. Russell and James J. Casey, Jr., ME July 92, p278-297.

Development of a Limit-State Seismic Code for Bridges, lan G. Buckle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p164-167.

p104-107.

A Distributed Particle Simulation Code in C++, David W. Forslund, Charles Wingate, Peter Ford, J. Stephen Junkins and Stephen C. Pope, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518.

Evaluation of the Model Water Code from an Environ-mental Ethic Perspective, Margot W. Garcia, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p231-236.

Heatmon, co., 1972, 1972

Flexural Tensile Strength of Partially Grouted Concrete Masonry, Ahmad A. Hamid, Omar A. Elnawawy and Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393.

Formulation of a Knowledge-Base for Building Design Simulation, Claude Bédard and Mathi Ravi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1129-1138.

Wright, ed., 1992), p1129-1138.
A Framework for the Documentation, Representation, and Processing of Design Standards, Nobuyoshi Yabuki and Kincho H. Law, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p97-104.

Ground Water Model Verification and Validation Issues, Task Committee on the Verification and Validation of Ground Water Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1922),

International Harmonization of Reliability-Based Timber Engineering Design Codes, Jozef Bodig, Michael Cald-well and Ronald W. Anthony, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-86.

Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230.

Multiple Presence Load Model for Bridges, Robert J. Heywood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p579-582.

On the Fatigue Loading for Local Components, Akhilesh Chandra Agarwal, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p583-586.

Online Design Codes: An Integrated Approach, S. Malasri, J. C. Olabe and L. Y. Lin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p285-292.

1992), p.263-294.
Regulatory Requirements to Address Issues Related to Volcanism and Magmatism: Code of Federal Regulations, Title 10, Part 60, Disposal of High-Level Radioactive Wastes in Geologic Repositories, John S. Trapp and Philip S. Justus, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2039-2046.

STACE: An Integrated Code for Evaluating Spent-Fuel Transport Cask Containment, Kevin D. Seager, Philip C. Reardon and Peter R. Barrett, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 1765-1769.

p1765-1769.
Two Paradigms for OOP Models for Scientific Applications, T. J. Ross, J. P. Morrow, L. R. Wagner and G. F. Luger, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p535-542.
What Should the ASCE Model Water Code Committee Do? Leonard Shabman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p237-241.
Wind Loads on Buildings with Sawtooth Roofs, Patrick J. Saathoff and Theodore Stathopoulos, ST Feb. 92, p429-446.

p429-446

Coefficients
Bed-Load Coefficients, Raul Pacheco-Ceballos, HY Oct. 92, p1436-1442.

72, p1436-1442.
Confidence Interval for Design Floods with Estimated Skew Coefficient, Jahir Uddin Chowdhury and Jery R. Stedinger, HZ July 91, p811-831.
Elastic Buckling Coefficients for Long, Unstiffened Plates, Julie Mark Cohen, EM Dec. 92, p2491-2496.
Equation for Evaportaion Pan to Evaportanspiration Conversions, Richard L. Snyder, IR Nov./Dec. 92, p377-989.

lomentum and Energy Coefficients Based on Power-Law Velocity Profile, Cheng-lung Chen, HY Nov. 92, p1571-1584.

Cofferdams

Cofferdam Construction Speeds Powerplant Rehab, CE
Mar. 92, p14.
Cofferdam Construction Speeds Powerplant Rehab, CE
Mar. 92, p14.
Cofferdam Construction Speeds Powerplant Rehab, CE
Cofferdam Construction Speeds Powerplant Rehab, CE
Mar. 92, p14.

Cofferdam is the Shape of Things to Come, CE Dec. 92, p21-22

Fly-Ash Slurry Island: I. Theoretical and Experimental Investigations, Sumio Horiuchi, Masataka Taketsuka, Takuro Odawara and Hiromi Kawasaki, MT May 92, p117-133.

Fly-Ash Slurry Island: II. Construction in Hakucho Ohashi Project, H. Kawasaki, S. Horiuchi, M. Akatsuka and S. Sano, MT May 92, p134-152.

Cohesion

Effective Cohesion for Compacted Clay, Robert W. Day,
GT Apr. 92, p611-619.

A Method for Estimating the In Situ Cohesion of Cemented Conglomerate, Edward A. Nowatzki and David
Kidd, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p158-174.

Sability: Tearry of Cohesius Crack Model Vuan N. Li

Stability Theory of Cohesive Crack Model, Yuan N. Li and Robert Y. Liang, EM Mar. 92, p587-603.

Cohesionless sediment Summary of Noncohesive Sediment Transport Process at the BedWater Column Interface, David H. Schoellhamer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p375-

Cohesionless soils

Compaction of Granular Soils—Remarks on Quality
Control, Michele Jamiolkowski and Erio Pasqualini,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p902-914.

1992, p902-914.
Deep Compaction by Vibro Wing Technique and Dynamic Compaction, Kaare Senneset and Jarle Nest-vold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p889-901.

Juran, ed., 1922, p.889-901.
Harmonic Excitation of an Unconstrained Saturated Particle Bed, Harri K. Kytömaa and Charles C. Abnet, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p640-643.
Hydraulic Conductivity of Noncohesive Soils, B. Aberg, GT Sept. 92, p1335-1347.

Improved Design Procedures for Vertically Loaded H-Piles in Sand, Harry M. Coyle and Ronald Ungaro, GT Mar. 91, p507-528.

Investigations on Influence of Vibration Parameters on Compacting of Cohesionless Soils, Jerzy Sekowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p969-980.

Mixed Hardening, Three-Invariants Dependent Cap Model, Sahel N. Abduljauwad, Isa M. Al-Buraim and Hamdan N. Al-Ghamedy, EM Mar. 92, p620-637.

A New Technique for Quality Control of Dynamic Compaction, Chaim J. Poran, King-Sen Heh and Jorge A. Rodriguez, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p915-926.

Passive Inclined Anchorages in Sand, James D. Geddes and E. J. Murray, GT May 91, p810-814.

Retaining Wall With Reinforced Cohesionless Backfill, Swami Saran, K. G. Garg and R. K. Bhandar, GT Dec. 92, p1869-1888.

Settlements of Shallow Foundations on Cohesionless

22, p1609-1608. Settlements of Shallow Foundations on Cohesionless Soils, Basil P. Papadopoulos, GT Mar. 92, p377-393. Void Ratio of Noncohesive Soils and Similar Materials, B. Aberg, GT Sept. 92, p1315-1334.

Measurement and Prediction of Surface Shear Stress in Annular Flume, D. I. Graham, P. W. James, T. E. R. Jones, J. M. Davies and E. A. Delo, HY Sept. 92, Jones, J. M p1270-1286.

Cohesive soils

Bearing Capacity on Nonhomogeneous Cohesive Soils under Embankments, Radoslaw L. Michalowski, GT July 92, p1098-1118.

July 32, p109-1118.
Constitutive Behavior of Stress-Induced Anisotropic Cohesive Soil, Jeff S. Budiman, Stein Sture and Hon-Yim Ko, GT Sept. 92, p1348-1359.
An Intrusive Fluid Mud Surveying System, Allen Teeter, Glynn Banks, Michael Alexander and Andrew Salkield, Hisdraulie: Engineering. System. a Threatend Re-Glynn Banks, Michael Alexander and Andrew Salkield, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017.Soil Behavior from Unconventional Loading Conditions, Kamal Tawfiq, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p272-

Cold regions
The Cold Truth About Landfills, CE Jan. 92, pl 1.

The Cold Truth About Landfills, CE Jan. 92, p11. Finite Element Analysis of Cold Embedments in Fresh Concrete, Daniel P. Swift, Jay A. Puckett and Thomas V. Edgar, CR. June 92, p41-57.

Microorganism Survival in Ico-Covered Marine Environment, S. J. Stanley, D. W. Smith and G. D. Milne, CR. June 92, p58-72.

Pressure of Crushed Ice as Mohr-Coulomb Material Against Flat, Axisymmetric Indentor, Dat Duthinh, CR. Dec. 92, p139-151.

Safety and Service Life of Fouriement Designed for Cold.

Safety and Service Life of Equipment Designed for Cold Climate Operation, V. P. Larionov, CR Sept. 92, p111-123

Cold weather construction

Concreting at Subfreezing Temperatures, Charles J.
Korhonen, Edel R. Cortez and Brian A. Charest, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p382-397.
Design Method for Frozen-Soil Retaining Wall, Sweanum Soo and B. B. Muvdi, CR June 92, p73-89.
Finite Element Analysis of Cold Embedments in Fresh Concrete, Daniel P. Swift, Jay A. Puckett and Thomas V. Edgar, CR June 92, p41-57.
Finite Element Simulation of Behavior of Laterally Load-Finite Element Simulation of Behavior of Laterally Load-

Finite Element Simulation of Behavior of Laterally Load-ed Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Cold weather operation

Cold weather operations Applying Lessons from Extreme Environments to Solve Problems on Earth and in Space, Larry Bell, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., Sadeh, ed., Stein 1992), p240-248.

Flow Rates at Signalized Intersections Under Cold Win-ter Conditions, Jan L. Botha and Thomas R. Kruse, TE May/June 92, p439-450.

Safety and Service Life of Equipment Designed for Cold Climate Operation, V. P. Larionov, CR Sept. 92, p111-123.

inter Operability: Equipment Problems and Their Remedies, Deborah Diemand, CR Sept. 92, p124-137.

Cold-formed steel
Compression Tests of Cold-Formed Steel Columns, C. C.
Weng and Teoman Pekoz, ST May 90, p1230-1246.
Effect of Strain Rate on Cold-Formed Steel Stub Columns, M. Kassar, C. L. Pan and W. W. Yu, ST Nov. 92, p3151-3168.

p.3151-3168.
Estimating Uplift Capacity of Light Steel Roof System, R. A. LaBoube, ST Mar. 92, p.848-852.
Residual Stresses in Cold-Formed Steel Members, C. C. Weng and Teoman Pekoz, ST June 90, p1611-1625.
Study on Maximum Strength of Cold-Formed Steel Columns, C. C. Weng and C. P. Lin, ST Jan. 92, p128-146.
T-Joints in Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Aug. 91, p.2258-2277.
Uplift Capacity of Z-Purlins, Roger A. LaBoube, ST Apr. 91, p1159-1166.

Coliforn bacteria

Application of a Boundary Fitted Coordinate Mass
Transport Model, Daniel L. Mendelsohn and J. Craig
Swanson, (Estuarine and Coastal Modeling, Malcolm
L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg,
ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992),
p382-404.

Coliforms

Coliforms
Modeling of CSO Impacts in Jamaica Bay and Tributaries, John P. St. John, William M. Leo and Robert Gaffoglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-95.

Collapse
Buckle Propagation in Submarine Pipelines, G. D. Hahn,
M. She and J. F. Carney, III, EM Nov. 92, p2191-2206.
Collapse Mode of Elastic-Plastic Structures, F. Giambanco, T. Panzeca and M. Zito, EM June 92, p1083-1092.
Comments on L'Ambiance Plaza Lifting Collary
Shearheads, William McGuire, CF May 92, p78-85.
Evaluation and Control of Collapsible Soils, Adnan A.
Basma and Erdil R. Tuncer, GT Oct. 92, p1491-1504.
The Generalized Brazier Problem for Orthotropic
Straight Tubes of Finite Length, C. W. Bert and A. Libai, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), p872-875.
Incremental Collapse of Structures with Constant Plus
Cyclically Varying Loads, Sidney A. Guralnick, Thomas Erber, Osama Soudan and Jixing He, ST June 91,
p1815-1833.

p1815-1833.
Instability of Buildings Subjected to Earthquakes, Dionisio Bernal, ST Aug. 92, p2239-2260.
Investigation of L'Ambiance Plaza Building Collapse, Daniel A. Cuoco, David B. Peraza and Thomas Z. Scarangello, CF Nov. 92, p211-231.
L'Ambiance Plaza: What Have We Learned, Virginia Fairweather, CE Feb. 92, p38-41.
Load Shortening in Plastic Buckling of Cylinders, Marwan El-Bkaily and Ralf Peek, EM Sept. 92, p1892-1906.

Manufactured Wood Joists—Noncollapse Failure, Theodore G. Padgett, Jr., CF Feb. 92, p58-64.
Reliability Analysis of Truss Structures with Multistate Elements. II, A. Karamchandani and C. A. Cornell, ST Apr. 92, p910-925.
Review of Wetting-Induced Collapse in Compacted Soil, Evert C. Lawton, Richard J. Fragaszy and Mark D. Hetherington, GT Sept. 92, p1376-1394.
Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, Julio E. Pulido, Timothy L. Jacobs and Edison C. P. Lima, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p507-510.
Supermarket Roof Collapse in Burnaby, British Columbia, Canada, C. Peter Jones and N. D. Nathan, CF Aug. 90, p142-160.
Collapse load

Collapse load
Upper Bound Limit Analysis of Deep Skirt Structures'
Foundations, Andrew V. Maller and James D. Murff,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p571-584.

Collapsible soils

Evaluation and Control of Collapsible Soils, Adnan A. Basma and Erdil R. Tuncer, GT Oct. 92, p1491-1504. Sample Disturbance of Cemented Collapsible Soils, Sandra L. Houston and Mostafa El-Ehwany, GT May 91, p731-752.

Settlement and Moisture Movement in Collapsible Soils, Mostafa El-Ehwany and Sandra L. Houston, GT Oct. Mostara E-1535.

Stress Ratio Effects on Collapse of Compacted Clayey Sand, Evert C. Lawton, Richard J. Fragaszy and James H. Hardcastle, GT May 91, p714-730.

Collision models

Mechanics of Saltating Grains. II, Masato Sekine and Hideo Kikkawa, HY Apr. 92, p536-558.

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Collisional Restitution Dependence on Viscosity, Jar Lundberg and Hayley H. Shen, EM May 92, p979-989.

A Sphere Moving Down an Inclined Bumpy Surface, Chy-an-Deng Jan, Hsieh Wen Shen, Chi-Hai Ling and Cheng-lung Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-771.

Colluvium

Strength Correlation Factor for Residual Soils, N. Lo-ganathan, Suraj de Silva and A. Thurairajah, GT Apr. 92, p593-610.

Colorado

Agricultural Option Contracts, John F. Scott, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p138-143.

Aircraft Noise Monitoring at Denver International Air-port, Andrew S. Harris, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p41-48.

The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257.

Airport, Robert E. Boyer, ed., 1992, p. 202-237.

The Design of the Airside Concourses, James M. Suchiro, Edward K. McCagg and J. M. Seracuse, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p.207-216.

Effect of Drought on Urban Water Supplies. I: Drought Analysis, David M. Frick, Dennis Bode and Jose D. Salas, HY June 90, p.733-753.

Fine Tuning the Airfield: The New Denver International Airport, Richard F. Veazey, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), 97-13.

Impact of the New Denver Airport on the Air Traffic Control System, Walter E. Flood, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p244-249.

Colorado River

Climate Change and Water Management Flexibility, Lin-da L. Nash, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-522.

Climatic Change and Ensuing Risks Facing Water Resources Managers, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992).

Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Irrigation and Drainage: Saving a Threatened Resource- in Search of Solutions, Ted Eng-man, ed., 1992), p171-176.

Managing Lower Colorado River, Daniel P. Sheer, Timo-thy J. Ulrich and Mark H. Houck, WR May/June 92, p324-336.

Simulation of Reservoir Operation Using Smart Reservoirs, Jon S. Behrens, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p606-613.

Water Demand Management in the Las Vegas Valley Re-gion, Timothy D. Feather and Nick Braybrooke, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992, p44-49.

Compression Tests of Cold-Formed Steel Columns, C. C. Weng and Teoman Pekoz, ST May 90, p1230-1246.

Study on Maximum Strength of Cold-Formed Steel Col-umns, C. C. Weng and C. P. Lin, ST Jan. 92, p128-146.

Analysis of Circular RC Columns for Short- and Long-Term Deformations, Mark Andrew Bradford and R. Ian Gilbert, ST Mar. 92, p669-683.

Analytical Moment-Curvature Relations for Tied Concrete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544.

Beam-Column Behavior of Fabricated Steel Tubular Members, H. G. L. Prion and P. C. Birkemoe, ST May 92, p1213-1232.

Behavior of Externally Confined Concrete Columns, M. W. Li, H. Saadatmanesh and M. R. Ehsani, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p677-690.

Bond Strength in Battened Composite Columns, Yasser M. Hunaiti, ST Mar. 91, p699-714. Buckling of Columns of Variable Flexural Rigidity, A. Siginer, EM Mar. 92, p640-643.

Column Design in Steel Frames under Gravity Loads, Oscar de Buen, ST Oct. 92, p2928-2935. Complete Biaxial Load-Deformation Behavior of RC Col-umns, Gang Gary Wang and Cheng-Tzu Thomas Hsu, ST Sept. 92, p2590-2609.

Critical Buckling Load Statistics of an Uncertain Col-umn, Garrett D. Jeong, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p563-566.

Design Aids for Reinforced Concrete Columns, Bao-Jun Sun and Zhi-Tao Lu, ST Nov. 92, p2986-2995. Design Charts for Timber Beam-Columns, Ramon Riba-Ramirez and Mehrdad Soltani, ST Feb. 92, p596-602.

Dynamics of Saturated Rocks. IV: Column and Borehole

Problems, Irene Vgenopoulou and Dimitri E. Beskos, EM Sept. 92, p1795-1813.

Effect of Strain Rate on Cold-Formed Steel Stub Columns, M. Kassar, C. L. Pan and W. W. Yu, ST Nov. 92, p3151-3168.

Elastic Stability of Composite Column, Yaxin Li, EM Nov. 92, p2320-2327.

Elastic Stability of Heavy Rotating Columns, C. M. Wang, EM Jan. 90, p234-239.

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski Brown, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p691-695.

Flexural-Torsional Stability of Thin-Walled Columns, Juha Paavola and Seppo Salonen, EM Dec. 92, p2384-

Full Scale Tests on Concentrically Loaded Fiber-Reinforced Pultruded Columns, D. W. Scott, S. J. Yoon and A. Zureick, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576.

ed., 1992), p572-576.

Investigation of Parametrically-Induced Excitation in Concrete Columns, Nader Ghafoori and Kambiz Farhang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1051-1054.

Investigation of the Behavior of Reinforced Plastic Columns with Concrete Core, Saeed Daniali, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p666-676.

Modified Stub-Girder Floor System: Full-Scale Tests. M.

Modified Stub-Girder Floor System: Full-Scale Tests, M. Ahmad, E. Y. L. Chien and M. U. Hosain, ST Nov. 92, p3222-3236.

New Stability Equation for Columns in Braced Frames, Raul Goncalves S., ST July 92, p1853-1870.

Re-examination of Ylinen and Other Column Equations, John J. Zahn, ST Oct. 92, p2716-2728.

John 3. Zahn, 31 Oct. 32, 210-2126. Reliability Model for Bridge Columns under Seismic Loads, Michel Ghosn and Ge Chen, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p168-171.

Second-Order Inelastic Analysis Methods for Steel-Frame Design, W. S. King, D. W. White and W. F. Chen, ST Feb. 92, p408-428.

Stability of Built-up Columns, Atle Gjelsvik, EM June 91, p1331-1345.

pl 33-1-343. Stability of Column Lowered Into Liquid of Higher Density, C. Y. Wang, EM Jan. 92, p204-210. Study on Maximum Strength of Cold-Formed Steel Columns, C. C. Weng and C. P. Lin, ST Jan. 92, pl 28-146. Use of Engineering Strain and Treffix Theory in Buckling of Columns, C. M. Wang and W. A. M. Alwis, EM Oct. 92, p2135-2140.

Columns, restrained

Elastic Stability of Heavy Rotating Columns, C. M. Wang, EM Jan. 90, p234-239.

Application of a Boundary Fitted Coordinate Mass Transport Model, Daniel L. Mendelsohn and J. Craig Swanson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p382-404.

Balancing Hydraulic Requirements for Storage and Di-version in Planning Subsurface Facilities for the Con-trol of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.

CSO Abatement for Gloucester Harbor in Massachusetts, Jon R. Pearson, Donald J. Chelton and Michael P. Col-lins, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solution, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1952), p1240-1241.

CSO Rehabilitation Strategies for Urban Areas, Larry A.
Roesner and Edward H. Burgess, (Water Resources
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p654-660.

Management of Portland's Combined Sewer System, Claudia L. Zahorcak, Lester E. Lee and Gordon A. Ni-Caudin L. Zanotcas, Lesel E. Lee and Gotom A. Ni-cholson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p468-473.

Modeling of CSO Impacts in Jamaica Bay and Tributar-ies, John P. St. John, William M. Leo and Robert Gaf-foglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-95.

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Using Simple Models to Evaluate Complex Storm Effects, Paul L. Freedman and John K. Marr, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-89.

Combustion Synthesis of Advanced Materials, J. J. Moore, H. J. Feng, N. Perkins and D. W. Readey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1389-1400.

Basic Principles and Techniques in Knowledge Acquisi-tion, Kenneth L. Modesitt, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p11-49.

Communication Creates Quality, Nips Conflict (ltr), Teck L. Chua, CE Nov. 92, p34,36.

Communication Protocol in Structural Design Objects, Jamal A. Abdalla and Sanjai Tiwari, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p269-276.

A Context for Understanding the Significance of Radiation Exposures from the MRS, Dan Kane, Ricardo Palabrica and Christine Van Lenten, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee 1992), p1938-1945.

Design-Build Goes Public, James Denning, CE July 92, p76-79.

The Dialogue of Players on the Development Stage, Barbara Barnow, (Site Impact Traffic Assessment: Prob-bers and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p200-204.

Education: Gateway to the Solution, Ginger P. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10.

The Human Factor in Failures, George F. Sowers, CE Mar. 91, p72-73.

The Impact of Risk Communications on Public Understanding: Combining a Survey with an Experiment, R. E. O'Connor and R. J. Bord, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p574-581.

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Improving Specifications, Joseph Goldbloom, CE Sept. 92, p68-70.

92, p68-70.
An Information System Architecture for Construction Materials, Sami Dib and Francois Grobler, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p332-339.
Knowledge Representation in Water Resource Management Using Prolog and Natural Language, Richard N. Palmer and Lynn Spence, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed. 1992), p144-160. d., 1992), p144-160.

ofessionalism: Cornerstone of Engineering, Perry L. Smith, El July 92, p258-260.

Smith, El July 92, p228-280.
Project Management: Keys to Success, David Bentley and Gary Rafferty, CE Apr. 92, p58-59.
Session Summary—Risk Associated With Climate Change, Ronald M. North, Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p343-A. N 345.

343.7 Technology is Here—Are You Ready? Paul A. LeMenager, ME July 92, p261-266. Technology Transfer for Projects in South America, Joseph B. Summers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p209-214.

Communication equipment
Assessing the Potential of E-Mail for Engineers: Case
Study, F. Safayeni, A. Yu, L. Purdy and E. Lee, ME
Oct. 92, p346-361.

Communication skills
Conflict Management Training for Today's Engineering
Managers, Vicki S. Kaman and James A. McCambridge, ME July 92, p298-305.

Dridge, ME July 92, p298-305.
Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163.
Holistic Approach to Irrigation Management in Developing Countries, Phillip Z. Kirpich, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Soutions, Ted Engman, ed., 1992), p263-268.
Improving Specifications, Joseph Goldbloom, CE Sept. 92, p68-70.
Plain Engineering: Philosophical and Ethical Vice.

Plain Engineering: Philosophical and Ethical View, Steven S. Crider, El Apr. 90, p148-155.

Community planning

Housing Opportunity or Social Engineering Implementing the Jobs-Housing Relationship—The Town of Wellington Experience, Jean E. Lindsey, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

p82-90.

Mineapolis/St. Paul International (MSP) Part 150 Implementation Design Overview, Steven J. Vecchi, (International Air Transportation: A New International Air Transportation: A New International Airport, Robert E Boyer, ed., 1992), p32-40.

PMSC: Pavement Management System for Small Communities, Amir Tavakoli, Mitchell S. Lapin and J. Ludwig Figueroa, TE Mar./Apr. 92, p270-280.

Promotting Private Irrigation Development: The Irrigation Sector Program Experience in Nepal, Richard Reidinger and Upendra Gautam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p221-226.

Community relations
Is It Good Business to Be a Citizen Engineer? Brent A. Campbell, CE Oct. 91, p54-55.
Knowledge Acquisition for an Expert System for Handling Customer Inquiries on Water Quality, Richard M. Males, Judith A. Coyle, Walter M. Grayman, Robert M. Clark, Harry J. Borchers and Beth G. Hertz, (Knowledge Acquisition in Criti Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p105-123. p105-123.

Politics and Engineering, Robert P. Cannon, CE Dec. 91, p69-70.

Providing Lead Role in Work-Force Diversity, Robert E. Wolfe and Marie E. Anspach, El Jan. 92, p38-48.

Community support Planning Water Supply and Sanitation Projects in Devel-oping Countries, Suley A. Muyibi, WR July/Aug. 92, p351-355.

Commuting patterns
Arizona's Metropolitan Travel Reduction Programs, Elizabeth K. Burns, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p76-84.
Commuter Infiltration, The Unaddressed Issue, Thomas J. Boyd and T. C. Sutaria, (Site Impact Traffic Assessment: Problems and Solutions, Robort E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p67-71.

II.

Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.

The Effectiveness of Telecommuting as a Transportation Control Measure, Srikanth Sampath, Somitra Saxena and Patricia L. Mokhtarian, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p347-345. 362

Compacted soils
Behavior of Compacted Lunar Simulants Using New
Yacuum Triaxial Device, Chandra S. Desai, Mamid
Saadatmanesh and Thomas Allen, AS Oct. 92, p425-441

Better Cover-Ups, Robert M. Koerner and David E. Dan-iel, CE May 92, p55-57. Effective Cohesion for Compacted Clay, Robert W. Day, GT Apr. 92, p611-619.

GT Apr. 92, p611-619. Estimating Earth Pressures Due to Compaction, J. M. Duncan, G. W. Williams, A. L. Sehn and R. B. Seed, GT Dec. 91, p1833-1847.

Long Term Behavior of Urban Fill Embankments, J. David Rogers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1238-1273.

Softening of Fill Slopes Due to Moisture Infiltration, Robert W. Day and Gregory W. Axten, GT Sept. 90, p1424-1427.

ater Content-Density Criteria for Compacted Soil Liners, David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830.

90, p1811-1830.

Compaction
Compaction Quality Control in Granular Shell of Earth
Dam, Panaghiotis C. Kotzias and Aris C. Stamatopoulos, GT Aug. 92, p1247-1255.

Construction and Performance of Two Large Rockfill
Embankments, Gordon M. Matheson and William F.
Parent, GT Dec. 89, p1699-1716.

Damage of Entryway Stairs due to Settlement of Grave
Backfill, Robert W. Day, CF May 92, p121-124.

Deep Compaction by Vibro Wing Technique and Dynamic Compaction, Kaare Senneset and Jarle Nestvold, (Grouting, Soil Improvement and Geosynthetics,
Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p889-901.

Diffusion of Radionuclides in Compacted Bentonite,
Jong-Won Choi, Choong-Hwan Jung, Kwan-Sik Chun,
Hyun-Soo Park, Joo-Ho Whang and Byung-Hun Lee,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p2278-2283.

Dynamic Compaction Analysis, Y. K. Chow, D. M. Yong,

Level Radioactive Waste Management Program Committee, 1992), p2278-2283.

Dynamic Compaction Analysis, Y. K. Chow, D. M. Yong, K. Y. Yong and S. L. Lee, GT Aug, 92, p1141-1157.

Dynamic Compaction Engineering Considerations, Robert G. Lukas, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p940-953.

Dynamic Compaction of Nuclear Waste, Cliff Schexnayder and Robert G. Lukas, CE Mar. 92, p64-65.

Dynamic Compaction: Predicting Depth of Improvement, Vince Luongo, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p927-939.

Estimating Earth Pressures Due to Compaction, J. M. Duncan, G. W. Williams, A. L. Sehn and R. B. Sed, GT Dec. 91, p1833-1847.

Evaluation and Control of Collapsible Soils, Adnan A. Basma and Erdi R. Tuncer, GT Oct. 92, p1491-1504.

Ground Improvement of Rubbish Dump Over Reclaimed Tin Mine, Aziz Mustafa and Mohd Raihan Taha, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1324-1331.

Indigenous Planetary Construction Material Through Soil Modification, Leonhard E. Bernold, Yasuyuki Horie and Mark B. Boslough, Eggineering, Construction, and Operations in Space 111, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p493-503.

Influence of Particle Structure on Properties of Fly Ash and Sand, Krzysztof Parylak, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1031-1041.

Lessons Learned from Compacted Clay Liner, Bill R. Els-bury, David E. Daniel, Gregory A. Sraders and David C. Anderson, GT Nov. 90, p1641-1660.

Micromechanical Model to Predict Sand Densification by Cyclic Straining, Ricardo Dobry and Emmanuel yelic Straining, Ricardo Detrakis, EM Feb. 90, p288-308.

A New Technique for Quality Control of Dynamic Com-paction, Chaim J. Poran, King-Sen Heh and Jorga A. Rodriguez, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p915-926.

One-Dimensional Settlement Analysis for Embankments, Peter A. Stauffer, Richard R. Davidson, Richard S. Ladd and David B. Paul, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403.

Postdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115.

Rapid Water Content by Computer-Controlled Microwave Drying, Paul A. Gilbert, GT Jan. 91, p118-138.

wave Drying, Paul A. Gilbert, GT Jan. 91, p118-138. Relative Compaction of Fill Having Oversize Particles, Robert W. Day, GT Oct. 89, p1487-1491. Review of Wetting-Induced Collapse in Compacted Soil, Evert C. Lawton, Richard J. Fragaszy and Mark D. Hetherington, GT Sept. 92, p1376-1394. The Role of Soil Modification in Environmental Engineering Applications, James K. Mitchell and Wade A. Van Court, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p110-143. Site Improvement for a Steel Mill Complex, Eun C. Shin, Bang W. Shin and Braja M. Das, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-828. 828.

Stabilized Active Clay by Sand Admixture, Pat T. Leelani, Maen M. Shaar and Phil V. Compton, (*Grouting, Soil Improvement and Geosynthetics*, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. 1042-1053.

Stabilizing Compacted Clay Against Chemical Attack, Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567.

Stress Ratio Effects on Collapse of Compacted Clayey Sand, Evert C. Lawton, Richard J. Fragaszy and James H. Hardcastle, GT May 91, p714-730.

Clay-Based Barrier Materials, B. H. Kjartanson, N. A. Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1129-1136.

The Use of Dynamic Compaction to Consolidate Nuclear Waste, Cliff Schexnayder and Robert G. Lukas, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1311-1323.

Variability in Compaction Control, Iraj Noorany, GT July 90, p1132-1136.

Compaction grouting
Building Protection from Tunneling in Downtown Los
Angeles, Loring A. Wyllie, Jr. and John A. Dal Pino,
(Excavation and Support for the Urban Infrastructure,
T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),

Compaction Grout, 1992, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p275-287.

Compaction Grout: Rheology vs. Effectiveness, James Warner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.229-239.

A Design Theory for Compaction Grouting, John H. Schmertmann and James F. Henry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p215-

Earthquake Support Grouting in Sands, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888.

Grouting Improvement of Foundation Soils, Francesco Gallavresi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), pl-38.

Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-261.

Limited Compaction Grouting for Retaining Wall Repairs, Michael J. Byle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.288-300.

Progress and Developments in Dam Rehabilitation by Grouting, Donald A. Bruce, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p601-613.

Recent Advances in Compaction Grouting Technology, James Warner, Norbert Schmidt, John Reed, Don Shepardson, Russ Lamb and Sam Wong, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

p791-802

Wanaque Filtration Plant Subgrade Stabilization—A Case History, Joseph D. Chastanet and Paul M. Blaki-ta, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p265-274.

Comparative studie

Characteristics of MOBILE4 and EMFACTE Models, Ju-lie Fieber, Barbara Austin and Jeremy Heiken, (Trans-portation Planning and Air Quality, Roger L. Wayson, ed., 1992), p255-570.

A Comparison of a New Generation of Spent Fuel Cask Designs with Current Cask Design Characteristics, William H. Lake, (High Level Radioactive Waste Mon-agement, High Level Radioactive Waste Management Program Committee, 1992, pl839-1843.

A Comparison of Geographical Information Systems, Carl E. Kurt, Khurshid Mohyuddin and Bo Guo, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p17-24.

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Comparison of Rigorous Slope Stability Methods: Stati-cal Aspects, Dov Leshchinsky, (Stability and Perform-ance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1070.

Cost Comparison of Timber, Steel, and Prestressed Concrete Bridges, R. A. Behr, E. J. Cundy and C. H. Goodspeed, ST Dec. 90, p3448-3457.

Deformational Behavior of Fiber-Reinforced Concrete Beams in Bending, H. V. Dwarakanath and T. S. Nagaraj, ST Oct. 92, p2691-2698.

Electronic Theodolites: Comparison Test, Abdalla Elsa-dig Ali, SU Feb. 91, p3-8.

Extremal Wave Statistics Using Three Hindcasts, Robert M. Wyland and Edward B. Thornton, WW Jan./Feb. 91, p60-74.

Generalized Slope Stability Analysis: Interpretation, Modification, and Comparison, Dov Leshchinsky and Ching-Chuan Huang, GT Oct. 92, p1559-1576.

Laboratory Simulations of Directionally Spread Shoaling Waves, Steve Elgar, R. T. Guza, M. H. Freilich and M. J. Briggs, WW Jan./Feb. 92, p87-103.

Laboratory versus Nondestructive Testing for Pavement Design, William N. Houston, Michael S. Mamlouk and Rohan W. S. Perera, TE Mar./Apr. 92, p207-222.

Lunar Mining—Surface vs. in Situ—A Comparative Study, Paulo Roberto Pereira, Russell J. Miller and Gary S. Brierley, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1195-1208.

and Russell J. Miller, ed., 1992), p1195-1208.
Modeling Guideline for Air Quality Analysis of Intersections, George J. Schewe, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p298-305.
Network Model Analysis of Traffic Patterns Resulting from a Proposed Regional Mall, Stephen Lawe, Norman Marshall and Peter Ryner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p89-93.

Sequential Versus Distributed Constraint-Based Approach to Structural Design Automation: A Comparative Study, Sivand Lakmazaheri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p261-268.
Strength of Concrete-Filled Thin-Walled Steel Box Columns: Experiment, Hanbin Ge and Tsutomu Usami, ST Nov. 92, p3036-3054.
Underground Research: Here and There, Raymond L. Sterling, CE Dec. 92, p56-58.
Validation of the SEADYN90 Cable Simulation Model Using a Three-Dimensional Cable Deployment Data Set, Paul A. Palo, Linda C. Teragouchi and Maureen T. Smith, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p273-287. Sequential Versus Distributed Constraint-Based Ap-

Compatibility Frame Buckling Analysis with Full Consideration of Joint Compatibilities, Yeong-Bin Yang and Shyh-Rong Kuo, EM May 92, p871-889.

Model Correction via Compatible Element Method, De-Wen Zhang and F. S. Wei, AS July 92, p337-346.

eral Liability Doesn't Cover Poor Workmanship, CE May 92, p28.

Competition

ADR, TQM, Partnering, and Other Management Fantasies, F. H. "Bud" Griffis, El Oct. 92, p331-344.

Bidding Strategy: Winning over Key Competitors, F. H. (Bud) Griffis, CO Mar. 92, p151-165.

Competition Leads to Losing, Frank Pierce Johnson, ME July 90, p258-261.

July 90, p258-261.

A Construction All-Nighter, CE Mar. 92, p8.

Critical Issues for Engineering Managers, Delon Hampton, ME July 92, p235-242.

Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.

Future Impact of Trucking Reform on Railway Revenue, Ahmed M. Gadi and Afifi H. Soliman, TE Sept./Oct. 92, p279-2743.

92, p729-743.

192, p129-743.
Improving International Competitiveness, Robert C. West, El Apr. 92, p107-112.
Metrication of Construction—A Message to the American Society of Civil Engineers, Thomas R. Rutherford, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 11992), p577-583.

United States Metrication and the EC 92, A. I. Johnson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p571-576.

1992), p571-576.
Using Computers to Competitive Advantage: Philosophy and Example, Philip C. Terry, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1105-1112.
Vertical Business Integration Strategies for Construction, Robert C. Krippaehne, Bob G. McCullouch and Jorge A. Vanegas, ME Apr. 92, p153-166.

A. Vanegas, ME. Apr. 72, p13-100.

Competitive bidding
Bidding Strategy: Winning over Key Competitors, F. H.
(Bud) Griffis, CO Mar. 92, p151-165.

Competitive Bids May Hamper R&D (ltr), Thomas
Rogers, CE Feb. 92, p31-32.

Competitive-Bid System Beats Some (ltr), Peter J. Nicholson, CE Feb. 92, p30.

Multinarameter Ridding System—Innovation in Contract

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Compliance
Analysis of Membrane Penetration in Triaxial Test,
Steven L. Kramer, N. Sivaneswaran and R. O. Davis,
EM Apr. 90, p773-789.
"Compression Planning" for Continuous Improvement
in Quality Programs, Yolanda A. Willis and Frank C.
Hood, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p1287-1297.
Density Changes During Undrained Loading—
Membrane Compliance, Mark D. Evans, GT Dec. 92,
p12924-1936.

p1924-1936.

petentiane Companies, and D. Evans, G. Developing an Industrial Toxics Management Program, Kathleen O. Gill and Tatiana Gianella, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p42-48.

Dynamic Design of Deepwater Bottom-Founded Towers, Denby Grey Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p850-889.

The Mother of All Resilient Structures: Fixed-Base Tower in 3000-Foot Water and Some Outstanding Issues, Peter W. Marshall, Susan L. Smolinski and Denby G. Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p258-272.

Program Analysis and Compliance Management, Thomas W. Woods and Dillard B. Shipler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1724-1729.

p1724-1729.

Urban Infrastructure: Our Crumbling POTW's, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p685-689.

Composite beams
Composite Beams with Partial Interaction under Sustained Loads, Mark Andrew Bradford and R. Ian Gilbert, ST July 92, p1871-1883.
Crepe Effects in Composite Beams with Flexible Shear Connectors, Angelo Marcello Tarantino and Luigino Dezi, ST Aug. 92, p2063-2081.
Economical LRFD Composite-Beam Design from HESCO, John Cook and Roger Blais, CC May 92, p1-37-11

Experimental Investigation of Bending and Twisting Coupling in Thin-Walled Composite Beams, Lawrence C. Bank and Steven J. Smith, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p884-887.

deasuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, David W. Jensen and John M. Cory, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1273-1285.

1992), p1273-1285.

A Primer for the Analysis of Composite Beams, E. C. Oguejiofor, M. U. Hosain and Jianing Ju, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1212-1219.

Reinforced Concrete Beams with Plates Glued to Their Soffits, Deric John Oehlers, ST Aug. 92, p2023-2038.

Shear Connectors in Composite Beams with Longitudinally Cracked Slabs, Deric John Oehlers and Sung Moo Park, ST Aug. 92, p2004-2022.

Shrinkage Measurements in Composite Ream Slabs, Israel Strinkage Measurements in Composite Ream Slabs.

Fair, S1 Aug. 92, p2004-2022.
Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsam, (Nondestructive Testing of Concrete Elements and Structures, Fariad Ansari, ed. and Stein Sture, ed., 1992), p215-225.
Slab Behavior in Composite Beams at Openings. I: Analysis, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p2287-2303.

92, p.2287-2303.
Slab Behavior in Composite Beams at Openings. II: Tests and Verification, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p.2304-2322.
Straight, Single-Tapered Composite I-Beams of Orthotropic Materials, Robert J. Leichti and Chai H. Yoo, MT Nov. 92, p.399-414.
Stresses in Open Section Fiber Reinforced Composite Beams Under Constant Shear Loading, Albert G. Zvarick and Thomas A. Cruse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1067-1070.
Structural Performance of Hardwood-Metal Composite

Structural Performance of Hardwood-Metal Composite Beams, Robert H. Kim and Jai B. Kim, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p718-731.

Statistical Analysis of Slender Composite Beam-Column Strength, S. A. Mirza and B. W. Skrabek, ST May 92, p1312-1332.

Strength of Concrete-Filled Thin-Walled Steel Box Col-umns: Experiment, Hanbin Ge and Tsutomu Usami, ST Nov. 92, p3036-3054.

Composite fabrication
Ultrasonic Wave Scattering by a Crack in a Composite
Plate, W. M. Karunasena, A. H. Shah and H. D. Mair,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p556-559.

Composite materials

An Analysis of an Inflatable Module for Planetary Surfaces, Paul S. Nowak, Willy Z. Sadeh and Marvin E. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p78-88.

Clear-Span Structure Sets Temporary Record, CE Apr. 92, p18-19.

Combustion Synthesis of Advanced Materials, J. J. Moore, H. J. Feng, N. Perkins and D. W. Readey, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1389-1400.

Comparison of Micromechanical Models for Elastic Properties, Cliff J. Lissenden and Carl T. Herakovich, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 309-1322.

Miller, ed., 1992), pl 309-1322.
Composite Materials for Structures on Planetary Surfaces, Donald W. Radford, Willy Z. Sadeh and Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 297-1308.
Composites for Offshore Applications: A Multidisciplinary Education Program for the Marine Industry, Diane S. Kukich, Vistasp M. Karbbari and John W. Gillespie, Ir., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p953-967.
Composites Performance in the Infrastructure. Richard

Composites Performance in the Infrastructure, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p532-545.

1992), p326-343.

Cracking and Debonding on Bimaterial Interface under Uniform Loading, Mikiya Okumura, Norio Hasebe and Takuji Nakamura, EM June 92, p1113-1128.

Creep and Creep Rupture of Metallic Composites, D. N. Robinson, W. K. Binienda and M. Miti-Kavuma, EM Aug. 92, p1646-1660.

Aug. 22, provo-1066.
Damage Dependent Micromechanics in Metal Matrix Composites, R. H. Jones, D. H. Allen and J. G. Boyd, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p99-102.

Dynamic Stability of Composite-Material Circular Cylindrical Shells with Orthogonal Stiffeners, C. W. Bert, C. D. Kim and V. Birman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p652-655.

p652-655.

Effect of Micro-parameters on the Macroscopic Behaviour of Ductile Fiber Reinforced Brittle Matrix Composites, Christopher K. Y. Leung and Jeffrey Chi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Nicdawecki, ed., 1992), p744-747.

The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, Marek-Jerzy Pindera and Alan D. Freed, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272.

Effects of Freezing on Impact Properties of RTM Compositions of the Composition of the Compositi

Effects of Freezing on Impact Properties of RTM Composites, and Their Applications in Offshore Structures, Gregory J. Pope and Vistasp M. Karbhari, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed.,

1992), p828-839.

1992), p828-839.
An Elasticity Solution for a Transversely Isotropic Material Containing a Spherical Shell Under Arbitrary Axisymmetric Loading, J. -Y. Wang and S. M. Heinrich, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1020-1023.
Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, J. Larralde, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654.

Fiber Pullout and Bond Slip. I: Analytical Study, Antoine E. Naaman, George G. Namur, Jamil M. Alwan and Husam S. Najm, ST Sept. 91, p.2769-2790. Fiber/Epoxy Composites Strengthen Bridge Columns, Ski. Brown, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),

Brown, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p691-695.
Finite Element Analysis of Thin-Walled Curved Beams Made of Composites, G. S. Palani and Sundaramoorthy Rajasekaran, ST Aug. 92, p2039-2062.
Fracture Analysis of Mortar-Aggregate Interfaces in Concrete, Kwang Myong Lee, Oral Buyukozturk and Ayad Oumera, EM Oct. 92, p2031-2047.
Fracture Toughness of DMMC, Richard J. Arsenault, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p228-231.
Fracture-Based Two-Way Debonding Model for Discontinuous Fibers in Elastic Matrix, Christopher K. Y. Leung, EM Nov. 92, p2298-2318.
Macromodeling of Complex Composites, P. K. Basu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1071-1074.
Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992, 0-87262-880-9, 776pp.

and Failures, Thomas D. White, ed., 1992, 0-87262-880-9, 776pp.
Metallized Microballoon EMI Shielding Materials, Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.
Microcrack Interaction Toughening in Ceramics and CMCs, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1016-1019.
Micromechanical Characterization of Damage-Plasticity.

Micromechanical Characterization of Damage-Plasticity in Metal Matrix Composites, George Z. Voyiadjis and Peter I. Kattan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p103-

Micromechanics and Effective Properties of Elastic Par-ticulate Composites, J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p95-98.

Micromechanics Based Design for Pseudo Strain-Hardening in Cementitious Composites, Victor C. Li and H. C. Wu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p740-

Micromechanics-Based Constitutive Model for Interface Shear, M. P. Divakar and A. Fafitis, EM July 92, p1317-1337.

The Microstructure of Hardened Cement Paste and Concrete, J. Francis Young, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p737-739.

Modeling Stiffness Degradation in Filamentary Composite Materials, Robert M. Hackett and Kerry T. Slattery, MT May 92, p196-211.

MT May 92, p196-211.

Moisture Effects on Flexural Performance of Wood Fiber-Cement Composites, Parviz Soroushian and Shashidhara Marikunte, MT Aug. 92, p275-291.

Neural Network-based Modeling of Composite Material with Emphasis on Reinforced Concrete, X. Wu and J. Ghaboussi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1179-1186.

1186.

Numerical and Experimental Studies of Vibration of Impact Damaged SMC Composite Plates, Shive K. Chaturvedi and Pay-Jye Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1063-1066.

Optimal Configuration for Fiber Reinforced Composites under Uncertainties of Material Properties and Loadings, Yoshisada Murotsu, Mistunori Miki and Shaowen Shao, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p547-550.

Optimization of Discontinuous Fiber Composites, Victor C. Li, M. Maalej and T. Hashida, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1000-1003.

Postbucking Behavior of Stiffened Composite Shell

ed., 1992), p1000-1003.

Postbucking Behavior of Stiffened Composite Shell Panels, S. Sridharan, A. Kasagi and M. Zeggane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p648-651.

Postbuckling of Polar Orthotropic Circular Plates—Retrospective, Archibald N. Sherbourne and Mahesh D. Pandey, EM Oct. 92, p2087-2103.

Postbuckling Response Simulations of Laminated Aniso-tropic Panels, Ahmed K. Noor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Postcrack Scaling Relations for Fiber Reinforced Cementitious Composites, Victor C. Li, MT Feb. 92, p41-57.

Predictions of Thermal Characteristics for Mixed Porous Media, Yueying Deng, Clifford B. Fedler and James M. Gregory, MT May 92, p185-195.

Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou and Nikola Deskovic, ST May 92, p1270-1284.

Properties of Composites Using Recycled Plastics, Karim S. Rebeiz, David W. Fowler and Donald R. Paul, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381.

Rule-Based Representation, Ashim Bose and Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p43-59.

Representation, Robert H. Allen, ed., 1992), p43-59.
A Shear Locking Free Three-Node Triangular Plate Bending Element for Moderately-Thick and Thin Symmetrically Cross-Ply Laminated Plates, Humayun R. H. Kabir, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p532-555.
Short-Term Behavior of Pultruded Fiber-Reinforced Plastic Frame, Ayman S. Mosallam and Lawrence C. Bank, ST July 92, p1937-1954.
Simple Cord Composite. Asthony J. Paris China Chan.

Simple Cord Composites, Anthony J. Paris, Ching-Chang Lin and George A. Costello, EM Sept. 92, p1939-1948.

Some Modeling and Analysis Techniques for Wave Propagation in Random Media, Georges A. Bécus, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p377-380.

Steady-State and Multiple Cracking of Short Random Fiber Composites, Victor C. Li and Christopher K. Y. Leung, EM Nov. 92, p2246-2264.

Stochastic Modeling of Short Fiber Reinforced Composites—A Review, Jamshid Mohammadi and Artur S. Kurzydlo, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p479-

Structural Materials from Lunar Simulants Through Thermal Liquefaction, Chandra S. Desai and Kirsten Girdner, (Engineering, Construction, and Operations in Space III, Willy 2: Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p528-536.

Thermal Load for p-Version Laminated Elements, Pabitra K. Saha, Nesar U. Ahmed and Gautam Saha, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1059-1062.

Unidirected Twined-Strand Composites and Their Uses, Charles E. Kaempen, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p546-539.

Utilization of Fly Ash in High Volumes for Low Strength Cement Composites, P. Balaguru, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p.308-

Vibration Control of Beams with Embedded Smart Com-posite Material, M. Arockiasamy, P. S. Neelakanta and G. Sreenivascu, AS Oct. 92, p492-498.

The Analysis Related to the Impact of Composite Panels, Ronald Perry, Anthony Palazotto and Raghbor San-dhu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1286-1296.

Basic Aspects of Damage Mesomodelling, P. Ladeveze and O. Allix, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p373-376.

Behavior of Concrete-Graphite/Epoxy Sections in Com-posite Bridge Girders, F. Gordaninejad, M. Saiidi and N. Wehbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709.

Behavior of Isotropic R/C Bridge Decks on Steel Girders, I. -K. Fang, J. Worley, N. H. Burns and R. E. Klingner, ST Mar. 90, p659-678.

Behavior of Partially Grout-Filled Damaged Tubular Members, S. Parsanejad and P. Gusheh, ST Nov. 92, p3055-3066.

Bond Strength in Battened Composite Columns, Yasser M. Hunaiti, ST Mar. 91, p699-714.

Characterization of Granular Material Composite Structures Using Computerized Tomography, Xiaogong Lee, William C. Dass and Charles W. Manzione, Lengineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p268-271.

Commentary on Proposed Specification for Structural Steel Beams with Web Openings (with Design Example), ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3325-3349.

Composite Beams with Partial Interaction under Sus-tained Loads, Mark Andrew Bradford and R. Ian Gil-bert, ST July 92, p1871-1883.

Crushing Response of Energy Absorbing Composite Structure, Gary L. Farley, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 9876-879.

Design/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, J. M. Sloss, I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137.

Dimensional Analysis of Buckling of Stiffened Composite Shells, B. Moradi and I. D. Parsons, EM Mar. 92,

Distortional Buckling Solutions for Continuous Compos-ite Beams, Mark Andrew Bradford and Zhi Gao, ST Jan. 92, p73-89.

Ductile Multiple-Anchor Steel-to-Concrete Connections, Ronald A. Cook and Richard E. Klingner, ST June 92, p1645-1665.

Elastic Buckling of Incomplete Composite Plates, Koichi Sato, EM Jan. 92, pl-19. Elastic Stability of Composite Column, Yaxin Li, EM Nov. 92, p2320-2327.

Nov. 92, p2320-2327.
FRP-Reinforced Wood as Structural Material, Nikolaos Plevris and Thanasis C. Triantafillou, MT Aug. 92, p300-317.
Full Scale Tests on Concentrically Loaded Fiber-Reinforced Pultruded Columns, D. W. Scott, S. J. Yoon and A. Zureick, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576.
In-Plane Non-Linear Random Vibration of Composite

ed., 1992), p572-576.

In-Plane Non-Linear Random Vibration of Composite Plates, Ronald S. Harichandran and Ahmad Hawwari, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p188-191.

Measuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, David W. Jensen and John M. Cory, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1273-1285.

Nonlinear Free Vibration of Laminated Composite

Nonlinear Free Vibration of Laminated Composite Plates, Alavandi Bhimaraddi, EM Jan. 92, p174-189.

riates, Alavandi Brimaraddi, EM Jan. 92, p174-189. Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou, Nikolaos Plevris and Nikola Deskovic, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717. Optimum Design of Composite Hybrid Plate Girders, Balaur S. Dhillon and Chen-Hsing Kuo, ST July 91, p2088-2098.

p. 2008-2078.

Optimum Design of Laminated Composites, R. S. Salzar, F. W. Barton and R. D. Ramsey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1323-1334.

Parametric Study of Continuous Prestressed Composite Girders, Wenxia Tong and Hamid Saadatmanesh, ST Jan. 92, p186-206.

Premature Failure of Externally Plated Reinforced Con-crete Beams, Deric John Oehlers and John Paul Moran, ST Apr. 90, p978-995.

Prestressed Composite Girders. I: Experimental Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2743-2762.

Prestressed Composite Girders. II: Analytical Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2763-2783.

Hamid Saadatmanesh, ST Oct. 92, p.2763-2783.
Probabilistic Assessment of Composite Structures, Christos C. Chamis and Michael C. -Y. Shiao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.543-547.
Properties of PVB Interlayer Used in Laminated Glass, C. V. Girja Vallabhan, Y. C. Dasa and Manjunatha Ramasamudra, MT Feb. 92, p.71-76.

Proposed Specification for Structural Steel Beams with Web Openings, ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3315-3324. for Nonlinear Vibrations of Composite Panels, Ahmed K. Noor, C. M. Andersen and Jeanne M. Peters, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883. Simultaneous Design and Control of Stiffened Leminated.

p880-883.

Simultaneous Design and Control of Stiffened Laminated Composite Structures, Luis Mesquita and Manohar P. Kamat, AS Jan. 92, pl 11-126. Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, EM Aug. 92, pl661-1678.

Strength of Composite Slabs, W. Samuel Easterling and Craig S. Young, ST Sept. 92, p2370-2389.

Thermomechanical Buckling of Multilayered Composite Plates, Ahmed K. Noor and Jeanne M. Peters, EM Feb. 92, p351-366.

74, 1931-300.

Imber Crib-Faced Soil-Nailed Retaining Wall, James G. Collin, Mohammed A. Gabr and Alan G. MacKinnon, (Stability and Performance of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1457-1463.

1992), p1457-1463.
Time-Dependent Analysis of Composite Steel-Concrete Sections, R. Ian Gilbert, ST Nov. 89, p2687-2705.
Transient Analysis of Flexible Space Structures, D. L. Rice and E. C. Ting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p827-838.
Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.
Wall System Makes the Cut, CE Dec. 92, p88.

Wall System Makes the Cut, CE Dec. 92, pps.
Camposting
Baltimore City Recycling Program—A Case History,
George G. Balog, Kenneth J. Strong and Ellen L. Kobler, (Environmental Engineering: Saving a Threatened
Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992, p. 532-536.
In-Vessel Compost Systems: Technology Status, Philip E.
Smith and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), 2991-296.
Unique Approach to Sludge Management, Suzanne L.
Schweitzer, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p262-268.

Compressibility
Analysis of Compressibility of Sensitive Soils, T. S.
Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi,
GT Jan. 90, p105-118.

GT Jan. 90, p105-118. Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov./Dec. 92, p848-864. Plastic Waste for Low-Weight Embankments, H. El Ghoche, C. Coulet and D. Daudon, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1368-

Settlements of Shallow Foundations on Cohesionless Soils, Basil P. Papadopoulos, GT Mar. 92, p377-393. Stress-Strain-Strength Responses of Compressible Chica-go Glacial Clays, Richard J. Finno and Choong-Ki Chung, GT Oct. 92, p1607-1625.

C<sub>0</sub>/C<sub>c</sub> Concept Applied to Compression of Peat, Patrick J. Fox, Tuncer B. Edil and Li-Tus Lan, GT Aug. 92, p1256-1263.

p. 103, Idules B. Bull and Li-Itus Lan, Gl Aug. 9, p1256-1263.

Compression Failure of Quasibrittle Material: Nonlocal Micropiane Model, Zdeněk P. Bažant and Joško Ožbolt, EM Mar. 92, p540-556.

Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Citical Evaluation of Thickening Theories, Athanasio Papanicolaou and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p735-740.

Deformation of Fill Slopes Caused by Wetting, Iraj Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257.

Hydrocompression Settlement of Deep Fills, Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, pi356-1548.
Kinematically Unconstrained Compression of Soft Clay, Richard J. Finno and Yongheun Rhee, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p143-

157.
Mixed Hardening, Three-Invariants Dependent Cap Model, Sahel N. Abduljauwad, Isa M. Al-Buraim and Hamdan N. Al-Chamedy, EM Mar. 92, p620-637.
Normal- and High-Strength Fiber-Reinforced Concrete under Compression, A. Samer Ezeldin and Perumalsamy N. Balgauru, MT Nov. 92, p415-429.
Postdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115.
Stress-Strein Current Control Paids Nov. 1115.

Stress-Strain Curves for Brick Masonry in Biaxial Com-pression, Krishna Naraine and Sachchidanand Sinha, ST June 92, p1451-1461.

ST June 92, p1451-1461.

Structural Materials from Lunar Simulants Through Thermal Liquefaction, Chandra S. Desai and Kirsten Girdner, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p528-536.

Theoretical Study of Stability Criteria for X-Bracing Systems, Dong Q. Wang and Arthur P. Boresi, EM July 92, p1357-1364.

Compression index C<sub>0</sub>/C<sub>c</sub> Concept Applied to Compression of Peat, Patrick J. Fox, Tuncer B. Edil and Li-Tus Lan, GT Aug. 92, p1256-1263.

Equations for Compression Index Approximation, A. W. N. Al-Khafaji and O. B. Andersland, GT Jan. 92, p148-153.

Compression tests Compression Tests of Cold-Formed Steel Columns, C. C. Weng and Teoman Pekoz, ST May 90, p1230-1246.

Local and Interaction Buckling of Polygonal Section Steel Columns, Yasuhiro Migita, Tetsuhiko Aoki and Yuhshi Fukumoto, ST Oct. 92, p2659-2676.

Quantitative Stereology of Concrete Microcracking, Kim D. Basham, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p123-126.

Compressive strength

Anisotropic Behavior of Cement-Grouted Sand, Raymond J. Krizek and Maan Helal, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p541-

Bond Strength of Straight GFRP Rebars, S. Tao, M. R. Ehsani and H. Saadatmanesh, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p598-605.

White, ed., 1972, p398-003.

Bonding Strength of Grouts and Behavior of Silicate Grouted Sand, C. Vipulanandan and A. Ata, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p700-711.

Chemical Based Cement Grout System for Rock Grouting, A. V. Shroff and D. L. Shah, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p651-

662. Compressive Strength and Characterization of Failure Modes for Polymer Concrete, S. Mebarkia and C. Vipulanandan, (Engineering Mechanics, Loren D. Luttes, ed. and John M. Niedzwecki, ed., 1992), p988-991. Constitutive Modeling of Slurry Infiltrated Fiber Concrete (SIFCON), David J. Stevens, (Engineering Mechanics, Loren D. Luttes, ed. and John M. Niedzwecki, ed., 1992), p992-995.
Contact Induced Damage, Leon M. Keer, (Engineering Contact Induced Damage, Leon M. Keer, (Engineering)

cu., 1992), p93-293.
Contact Induced Damage, Leon M. Keer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p502-505.
A Cumulative Failure Criterion of Concrete Under Uniaxial Dynamic Compressive Loading, Tianxi Tang and Dan G. Zollinger, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p860-843.

Effects of Mixing on Rheological Properties of Microfine Cement Grout, Lois G. Schwarz and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p512-525.

Engineering Properties of Acrylate Polymer Grout, Raymond J. Krizek, Dominique F. Michel, Maan Helal and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724.
Evaluation of Compressive Strength for High-Strength Concrete by Pulse Velocity Method, R. Sri Ravindrarajah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p15-126. 1992), p115-126.

1992), p115-126.

High Strength, Low Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p363-372.

Mechanical Properties of Microfine Cement/Sodium Silicate Grouted Sand, Raymond J. Krizek, Hung-Jiun Liao and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p688-699.

Methods to Estimate Composition of Jet Grout Bodies, L. Joseph Kauschinger, Rachid Hankour and E. B. Perry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p194-205.

Microfine Cement/Sodium Silicate Grout. Hung-Jiun

1792, p194-203.
Microfine Cement/Sodium Silicate Grout, Hung-Jiun Liao, Roy H. Borden and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p676-687.
Mix Design for Elegable Fly Ad. Backett Material. Mix Design for Flowable Fly-Ash Backfill Material, R. Janardhanam, F. Burns and R. D. Peindl, MT Aug. 92, p252-263.

p252-263.

Neural Network for Predicting Concrete Strength, Trefor P. Williams, Anil Khajuria and P. Balaguru, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1082-1088.

Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, Kwang W. Kim, Bong H. Lee, Je-Seon Park and Young S. Doh, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343.

Rate Effects in Uniaxial Dynamic Compression of Con-crete, Tianxi Tang, Lawrence E. Malvern and David A. Jenkins, EM Jan. 92, p108-124.

Schifflerized Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1920-1936.

July 92, p1920-1936. Simple and Efficient Methods to Produce Construction Materials for Lunar and Mars Bases, Voji Ishikawa, Tetsuo Sasaki and Tetsum Higasayama, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1335-1346.

Strength and Corrosion Resistance of Superplasticized Concretes, Mohammed Maslehuddin, Rasheeduzzafar and Abdulaziz Ibrahim Al-Mana, MT Feb. 92, p108-

Strength and Shrinkage of Natural Pozzolanic Mortar in Hot Weather, Jihad S. Sawan, MT May 92, p153-165.

Ultrafine Cement Tests and Dam Test Grouting, William J. Clarke, Millard D. Boyd and Maan Helal, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p626-638.

D Open-Channel Flow Simulation Using TVD-McCormack Scheme, P. García-Navarro, F. Alcrudo and J. M. Savirón, HY Oct. 92, p1359-1372.

Accurate Method for Calculation of Saturation DO, Hesong Hua, EE Sept./Oct. 90, p988-990.

Arc-Length Method for Passing Limit Points in Structural Calculation, W. F. Lam and C. T. Morley, ST Jan. 92, p169-185.

ASG COGO, Brian Brenner and Dennis Njuguna, CC Mar. 92, pl. 4-6. Calculation of Total Conveyance in Natural Channels, J. Garbrecht and G. O. Brown, HY June 91, p788-798.

Garbeen and C. O. Blown, 11 June 7, p. 788-798.

Computation of Long-Term Three-Dimensional Hydrodynamics of New York Bight, Keu W. Kim, David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p500.

Computation of the Least Eigenvalue on a Memory-Sharing Multiprocessor Computer, Jenn-Ching Luo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p754-761.
Computational Framework for 3D Nonlinear Discrete Crack Analysis, V. E. Saouma, R. W. Reich and J. Cervenka, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p788-791.
Conceptual Bed-Load Transport Model and Verification for Sediment Mixtures, Shaobua Marko Hsu and Forrest M. Holly, Jr., HY Aug. 92, p1135-1152.
Cut and Fill Calculations by Modified Average-End-Area Method, James W. Epps and Marion W. Corey, TE Sept./Oct. 90, p683-689.
Diffuse Double-Layer Equations in SI Units, Albert T. Yeung, GT Dec. 92, p2000-2005.
Direct Analysis of Prestressed Concrete Members, A. S. Prasada Rao, ST Dec. 90, p3432-3447.
Distributed Failure Analysis, Fallacies and Remedies, Kaspar Willam, Andreas Dietsche, Guillermo Etse and Paul Steinmann, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p772-775.

775.

Dynamic Response Analysis of Pile Foundations by Using Variational Calculus, Toyoaki Nogami, Jian-Xiong Zhu and Takayoshi Ito, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p588-591.

Effect of Active Control on Closely Spaced Natural Frequencies, K. Xu, P. Warmitchai and T. Igusa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p693-696.

Efficient Calculation of Transient Flow in Simple Pipe Networks, Bryan W. Karney and Duncan McInnis, HY July 92, p1014-1030.

Experiences in Using C++ to Develop a Next Generation

Networks, 5134 N. Xalmey and Doncan McInnis, N. July 92, p1014-1030.

Experiences in Using C++ to Develop a Next Generation Strong Shock Wave Physics Code, James S. Peery and Kent G. Budge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p527-534.

Fast Algorithm for the Rectilinear Single Facility Location Problem, G. L. Xue and J. B. Rosen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1113-1120.

Frequency Surface for Rainfall Intensity and Duration, G. V. Loganathan and M. A. Parkin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p386-390.

Fundamental Frequency of Tapered Plates by Differential Chadrature, Anant R. Kukreti, Jalaleddin Farsa and Charles W. Bert, EM June 92, p1221-1238.

Geometrical Imperfections on Inelastic Frame Behavior,

and Charles W. Berl, Ew June 72, p12-17-18. Geometrical Imperfections on Inelastic Frame Behavior, Eric M. Lui, ST May 92, p1408-1415. Highly Accurate Adaptive hp-Methods for Linear Elastostatics, J. Tinsley Oden, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 629-639. p628-631.

D. Lutes, ed. and John M. NeteZweet, ed., 1932, p628-631. Important Sources of Errors in Computational Hydraulics, Nosrat Maghsoudi and Daryl B. Simons, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p392-397. Improved Time-History Analysis for Structural Dynamics Calculations, C.—C. Chen and A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p449-452. Modeling DO Conditions in Structural Dynamics of the Medical Engly Method for Parameter Estimation in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, ST Jan. 92, p223-242.
The Net-Flux Sediment Concentration Bottom-Boundary Condition for Rippled Beds, César Mendoza-Cabrales,

The Net-Flux Sedimeni Concentration Bottom-Boundary Condition for Rippled Beds, Cesar Mendoza-Cabrales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992, p126-131.
Open-Channel Flow Algorithm in Newton-Raphson Form, John N. Paine, IR Mar/Apr. 92, p306-319.
Optimal Design for Plate Buckling, W. R. Spillers and Robert Levy, ST Mar. 90, p850-888.
Plane Frame Optimum Design Environment Based on Genetic Algorithm, W. M. Jenkins, ST Nov. 92, p3103-3112.

Prediction of Natural Channel Hydraulic Roughness, Sid-dig E. Ahmed and Mohammed B. Saad, IR July/Aug. 92, p632-639.

Random Initial Heterogeneity and Degradation in Brittle Materials, X. Yuan, F. F. Tang and G. Frantziskonis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p616-619.

andom Vibration under Propagating Excitation: Closed-Form Solutions, Ronald S. Harichandran, EM Mar. 92, p575-586. Random

Mail. 74, p.57-300.

Shielding Design of the Ventilated Storage Cask, John H. Kessler, John V. Massey and Henry H. Tran, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2047-2055.

Lever Raumoactive waste Management, riigh Level Radioactive Waste Management Program Committee,
1992), p2047-2055.
Stability of Systems of Rigid Bodies by Bounding Theorems, Thomas E. Boothby, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p904-907.
Stability Problems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p846-851.
Standard Reference Evapotranspiration Calculations:
REF-ET, Richard G. Allen, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p140-145.
Steady and Unsteady Flow Profiles in Reclamation, Curtis J. Orvis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p872-877.
Temporal Variation of Scour Around Circular Bridge
Piers, Umesh C. Kothyari, Ramchandra J. Garde and
Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.
Tide and Hurricane Storm Surge Computations for the
Western North Atlantic and Gulf of Mexico, Joannes J.
Westerink, Julia C. Muccino and Richard A. Luettich,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p538-550.
WSPRO, A Model for Water-Surface PROfile Computations, James O. Shearman, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p865.

1992), p865.

1992), p865.

Computer aided drafting (CAD)

An Agenda for AEC PDES Research, Jason P. Heroux, Douglas J. Peters, William J. Rasdorf and John W. Baugh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p376-385.

CAD and the Corps, B. Ray Summerell, Kevin Carrigan and Jamie B. Wrenn, CE June 92, p52-54.

CADD Utilization in Residential Construction: From Subdivision Design to Dwelling Unit, M. G. Syal, C. McIntyre and J. H. Willenbrock, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p207-213.

A Comparison of Geographical Information Systems,

1992), p207-213.

A Comparison of Geographical Information Systems, Carl E. Kurt, Khurshid Mohyuddin and Bo Guo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p17-24.

Computational Laboratory for Discrete Element Geomechanics, John M. Ting and Brent T. Corkum, CP Apr. 92, p129-146.

74. p147-140.
Construction Automation Work Classification, Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p500-505.
Controlling CADD Quality, CC Sept. 92, p11,13.
Customizing CADD Software, Robert M. Pasley, CC Aug. 92, p7-9.

Developing a Functioning Visualization and Analysis System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p846-851.

mittee, 1992), p840-851.

A Framework for the Documentation, Representation, and Processing of Design Standards, Nobuyoshi Yabuki and Kincho H. Law, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p97-104.

Glueware, Brian Brenner and Cynthia Gagnon, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 220-1225.

Graphical Models for Simulation and Control of Robotic Systems for Waste Handling, William D. Drotning and Phil C. Bennett, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p974-979. Highway Design in 3-D, Richard D. Sullivan, CE June 92, p68-70.

This Corner...AutoCad Release 12 vs. Microstation PC 4.0, Ranjit Sahai, CC Sept. 92, p1-8. In This Corner...

Kanjit Sanai, CC Sept. 92, p1-8.
 Integrated Approach to Highway Design and Environmental Impact Analysis Using GIS and CADD, William L. Galbraith, Joseph G. Anthony and Anne Sulivan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p161-167.

and Jeff R. Wright, ed., 1924, p161-167.
Integrated Approaches for Costing Design Alternatives,
Guillermo F. Salazar, Stephanie Foulke and Luigi DiMonaco, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p848-855.

Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Alice M. Agogino and Anthony R. Ingraffea, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p356-363.

Landfills: Anatomy of Automated Design, Juan C. Vargas and David B. Porter, CE Mar. 92, p52-55.

and David B. Porter, C.E. Mar. 72, p32-33.
An Operational Evaluation Process for Long-Duration Mission Habitats in Space, M. Novara, E. Raffner and D. Antonelli, Cengineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Progressive Is millier, ed., 1992), p1579-1590. Progressive Integration of the Personal Computer Into an Undergraduate Civil Engineering Curriculum, Thomas A. Lenox and Terry D. Hand, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p65-72.

Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352. Sizing Up Release 12, M. Kevin Parfitt, CC Aug. 92, p1,4-7.

Surveying Advantage, Robert S. Williams, CC Aug. 92, p1-3,14. Programment Models in CADD, Cynthia Gagnon and Brian Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p43-442.

Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert Logcher, CP Jan. 92, p85-105.

Use of Mathematical Programming Methods for Complex Systems, James G. Uber, E. Downey Brill, Jr. and John T. Pfeffer, WR May/June 92, p281-294.

Computer aided instruction

Department's Perspective on Computer Education, Rafael G. Quimpo and Joel I. Abrams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p73-80.

A Facility for Training Space Station Astronauts, Ankur R. Hajare and James R. Schmidt, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

ed., Stein St p1645-1655.

ITS-CONCRETE: A Functional Description, H. Gordon Thompson, II. and Nelson C. Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p222-228.

Real-Time Integrated Computer-Aided Instruction, Jorge A. Vanegas, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p81-88.

Computer Analysis Helps Lower Cost, CE Nov. 92, p87.

Computer Analysis of the East Huntington Cable-Stayed Bridge, Hany J. Farran and William Lai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p687-694.
Construction in 3-D, CE Feb. 92, p12.

Data Abstraction in Engineering Software Development, John W. Baugh, Jr. and Daniel R. Rehak, CP July 92, p282-301.

robing the Golden Gate, Mark A. Ketchum and Al Hel-dermon, CE June 91, p42-45.

Computer applications
Achieving Computer-Integrated Construction, Matt Syal,
M. Kevin Parfitt and Jack Willenbrock, CC Aug. 92,

M. Kevin Parfitt and Jack Willenbrock, CC Aug. 92, p10-11.
Adaptive and Parallel Methods for Nonlinear Solid Mechanics, T. Belytschko, L. P. Bindeman, H. Y. Chiang, E. J. Plaskacz and I. S. Yeh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p27-41.

1992), p27-41.

Advanced Technology Applications in Chicago-Area Freeway Traffic Management Program, Joseph M. McDermott, TE May/June 92, p451-456.

Application of Neural Networks in Earthmoving Equipment Production Estimating, Saeed Karshenas and Xin Feng, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p841-847.

Appropriate Technology for Flood Warnings, Mark E. Nelson, CE June 92, p64-66.

Aspects of Virtual Master Builder, Victor E. Sanvido, Steven J. Fenves and John L. Wilson, El July 92, p261-278.

Assessing the Potential of E-Mail for Engineers: Case Study, F. Safayeni, A. Yu, L. Purdy and E. Lee, ME Oct. 92, p346-361.

Automated Construction Field-Data Management Sy tem, Bob G. McCullouch, TE July/Aug. 92, p517-526.

tem, Bob G. McCullouch, TE July/Aug. 92, p517-526. Better Use of Computer Resources, Ray Arthur Pixley, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1015-1021. Bootstrapping Models Using Existing Databases and Ob-ject Orientation, Rene F. Reitsma and David Sieh, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p598-605. Borosilicate Glass (n.) Sources Used With Origen-Type.

Ben R. Wright, ed., 1992, p. 199-003.

Borosilicate Glass (a,n) Sources Used With Origen-Type Calculations, O.W. Hermann and R. Salmon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1272-1280.

Bridge Management to Get Computer Assist, CE Apr. 92,

Coarse-Grain Parallel Computing Using ISIS Tool Kit, Ralph Finch and Shao-Kong Kao, CP Apr. 92, p233-244.

244.
Computation of the Least Eigenvalue on a Memory-Sharing Multiprocessor Computer, Jenn-Ching Luo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p754-761.
Computer Iterative Technique for Soil-Structure Interaction, Rusk Masih, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p418-425.
Computer-Aided Characterization of Wellfield-Testing Results in Basalts, J. A. Paschis, J. R. Kunkel and T. D. Steele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Computer-Aided Concrete-Placement Optimization, R. Computer-Aided Concrete-Placement Optimization, R.

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.
Computer-Controlled Brick Masonry, Leonhard E. Bernold, Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-160.

Computerized Management Systems for Pavement Networks, Kathryn A. Cation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed. 1992), p293-300.

Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, 0-87262-869-8, 1260pp.

Computing in Civil Engineering: Current Trends and Fu-ture Directions, Nelson C. Baker and Glenn J. Rix, El Apr. 92, pl 39-155.

The Connecticut Photolog Laser Videodisc-Based Pave-ment Rating System, Richard C. Hanley and Donald A. Larsen, TE Mar./Apr. 92, p258-269.

Larsen, 1E Mar. Apr. 32, p23-207.

A Connectionist Vertical Formwork Selection System, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1171-

Cranes, Concrete, Construction...and Computers, Paul Tarricone, CE June 92, p44-47.

Department's Perspective on Computer Education, Rafael G. Quimpo and Joel I. Abrams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p73-80.

ed., 1992), p73-80.

Development of Computer Automated Bridge Inspection Process, S. S. Kuo, Thomas E. Davidson and Leonard M. Fiji, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p794-801.

Digital Imaging Concepts and Applications in Pavement Management, Stephen G. Ritchie, TE May/June 90, p287-298.

Distributed Approach to Optimized Control of Street Traffic Signals, Nicholas V. Findler and John Stapp, TE Jan./Feb. 92, p99-110.

A Distributed Particle Simulation Code in C++, David W. Forslund, Charles Wingate, Peter Ford, J. Stephen Junkins and Stephen C. Pope, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518.

Effect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p1796-1814.

Efficient Calculation of Transient Flow in Simple Pipe Networks, Bryan W. Karney and Duncan McInnis, HY July 92, p1014-1030.

July 72, p.1014-1030. Environment for Educational Use of Professional Engineering Software, Richard Sause, John L. Wilson, Mark Tamaro and Brenda Wildrick, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.214-221.

EQSWP: Extended Unsteady-Flow Double-Sweep Equation Solver, Theodor Strelkoff, HY May 92, p735-742.

Equation for Evaporation Pan to Evapotranspiration Conversions, Richard L. Snyder, IR Nov./Dec. 92, p977-980.

Ethics and Pitfalls, Jack P. Norris, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 101-1104.

Experiences in Using C++ to Develop a Next Generation Strong Shock Wave Physics Code, James S. Peery and Kent G. Budge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p\$27-534.

Expert System for Anaerobic-Digestion-Process Opera-tion, Michael W. Barnett and John F. Andrews, EE Nov./Dec. 92, p949-963.

Expert Systems: Ready to Hit the Road? James Denning, CE June 92, p71-74.

A Fast Algorithm for the Rectilinear Single Facility Location Problem, G. L. Xue and J. B. Rosen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1113-1120.

A feasibility study for a Concrete Core Tomographer, A. M. Abdel-Ghaffar, R. M. Leahy, S. F. Masri and C. E. Synolakis, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p37-48.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Panagiotis Mirtopoulos, CO sept. 92, p435-433.
Form Comparison Without Anatomical Landmarks,
Gautam Dasgupta, Mona E. McAlarney, Colin Goodall, Letty Moss-Salentijn and Melvin L. Moss, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975.

Formulation of a Knowledge-Base for Building Design Simulation, Claude Bédard and Mathi Ravi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1129-1138.

Geographic Information Systems in Earthquake Hazard Analyses, J. David Frost, Jean-Lou A. Chameau and Ronaldo Luna, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p452-459.

Geographic Information Systems—Evolutionizing the Decision Making Process, Dennis H. Klein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1204-1211.

Hello Computer, Good-bye Clipboard, CE Jan. 92, p11.

Wright, ed., 1992b, p1204-1211.
Hello Computer, Good-bye Clipboard, CE Jan. 92, p11.
Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.
An Information System Architecture for Construction Materials, Sami Dib and Francois Grobler, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p332-339.
Instructional Modules for Tunnel Design and Construction, Charles W. Schwartz, Herbert H. Einstein and Guillermo E Salazar. (Computing in Civil Engineering)

Guillermo F. Salazar, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-373.

p. 108-3/13. Integrating Facility Delivery through Spatial Information, Teresa M. Adams, Alan P. Vonderohe, Jeffrey S. Russell and James L. Clapp, UP Mar, 92, p. 13-23. Integration of AM/FM/GIS with MODELING/DESIGN on Large Utility PC Network, J. Darrell Bakken and Charline M. Avey, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p. 703-711.

Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

Interactive Slope Analysis Using Spencer's Method, Sunil Sharma and Abdul Moudud, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p506-520.

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

Knowledge Based-Object Oriented Primitive Work Item Generation, Joon Won Lee, Francois Grobler and M. Kevin Parfitt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p959-966.

Knowledge Representation: An Overview, Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p1-14.

Knowledge-Based Advisory System for Public-Sector Design-Build, Anthony D. Songer, C. William Ibbs, James H. Garrett, Thomas R. Napier and Annette L. Stumpf, CP Oct. 92, p456-471.

Linking Data Bases to Hydraulic Computations, Brian R. Turcotte and N. Davies Mundu, CP Jan. 92, p63-71.

Linking Design Data with Knowledge-Based Construction Systems, H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753.

Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in

Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p582-589.

Mesh Generation for Estuarine Flow Modeling, Norman L. Jones and David R. Richards, WW Nov/Dec. 92, p599-614.

Microcomputer-Based Project Management for Small En-gineering Firms, Thomas E. Glavinich, ME Jan. 92, p53-62.

Modeling Input Data for Construction Simulation, Simaan M. AbouRizk and Daniel W. Halpin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1147-1154.

The Most Dangerous Technology Ever Built, CC Oct. 92,

p8,12.

pb, 12.
White the Civil Engineering Classroom, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p245-252.

Network Applications of the USGS Branch Model, Raymond W. Schaffranek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1159-1164.

Neural Network Based Classifiers in Vibrational Signa-ture Analysis, M. F. Elkordy, K. C. Chang and G. C. Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073.

Neural Network for Predicting Concrete Strength, Trefor P. Williams, Anil Khajuria and P. Balaguru, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1082-1088.

Neural Network-based Modeling of Composite Material with Emphasis on Reinforced Concrete, X. Wu and J. Ghaboussi, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1179-

Neural Networks and their Applicability within Civil Engineering, James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1155-1162.

Neural Networks Based Damage Detection in Structures, Zbigniew P. Szewczyk and Prabhat Hajela, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1163-1170.

Neural Networks in Dynamic Analysis of Bridges, Stuart S. Chen and Ketan Shah, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1058-1065.

Neuroform—Neural Network System for Vertical Form-work Selection, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, CP Apr. 92, p178-199.

New Stability Equation for Columns in Braced Frames, Raul Goncalves S., ST July 92, p1853-1870.

Object-Oriented Programming, Walid T. Keirouz, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p80-103.

An ORIGEN2 Update for PCs and Mainframes, Scott B. Ludwig, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p93-98.

ORIGNATE: PC Input Processor for ORIGEN-S, Stephen M. Bowman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p88-92.

Overview of ORIGEN2 and ORIGEN-S: Capabilities and Limitations, C. V. Parks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p57-64.

management Program Committee, 1992), p57-64.

PC-Based Discrete Event Simulation Model of the Civilian Radioactive Waste Management System, G. L. Airth, J. W. Nehls and D. S. Joy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1317-1323.

Predicting Tower Guy Pretension Using a Neural Net-work, Raja R. A. Issa, Desmond Fletcher and Ruth Ann Cade, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1074-1081

A Preliminary Report on OCR Problems in LSS Docu-ment Conversion, T. A. Nartker, J. Kanal and S. V. Rice, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2106-2108.

Pricing of Services, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1089-1094.

QLRS: An Approach for Qualitative Interpretation of Lateral Load Resisting Systems, Renate Fruchter and Helmut Krawinkler, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p253-260.

Recent Experiences in PC Software Development, Kenneth M. Will, Asquith Bailey and Timothy Dodd, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1195-1203.

Jen R. Wright, ed., 1992, p.1193-1203.

Representing Building Product Information Using Hypermedia, Sunil K. Evt, Sari Khayyal and Victor E. Sanvido, CP Jan. 92, p3-18.

The Role of ORIGEN-S in the Design of Burnup Credit Spent Fuel Casks, M. C. Brady, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p65-71.

Simple Procedure for Determining Cap-Plasticity-Model Parameters, Tien-Kuen Huang and Wai-Fah Chen, GT Mar. 90, p492-513.

Skull Object Space: Essential Knowledge Typologies for Proprietary Brand Name or Equal Specifications Inter-pretation, Jesus M. De La Garza and Gaye A. Oralkan, prefation, Jesus M. De La Garza and Gaye A. Chanan (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p614-622.

Smart Structures, Rita Robison, CE Nov. 92, p66-68.

Solving Turbulent Flows Using Finite Elements, John I. Finnie and Roland W. Jeppson, HY Nov. 91, p1513-

Statically Determinate Trusses Programmed in Logic, Vlasis K. Koumousis and Panos G. Georgiou, CP Oct. 92, p435-455.

Strategic Planning for Technology Development, Eitan S. Agai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1036-1041.

Structural Design of Lunar Radio Telescope Using Inter-active CAD, Ferhat Akgul, Walter H. Gerstle and Stew-art W. Johnson, AS Jan. 92, p12-23.

Technology is Here—Are You Ready? Paul A. LeMenager, ME July 92, p261-266.

Testing Photoelectric Sensor System to Classify Vehicles, J. L. Gattis and Clyde E. Lee, TE May/June 92, p457-471.

Three Dimensional Visualization in Support of Yucca Mountain Site Characterization Activities, David W. Brickey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p458-461.

Three-Dimensional Characteristics Model of Wind-Generated Turbulent Flow, Panayis-Fokion Matsoukis and Aristotelis Papadopolis-Dezorzis, EM Aug. 92, p1526-1545.

Tidal Model Using Method of Characteristics, Panayis-Fokion C. Matsoukis, WW May/June 92, p233-248. Total Stress Analysis of Cantilever Sheetpiling in Layered Clay, Jay S. DeNatale and German A. Ibarra-Encinas, GT July 92, p1064-1082.

Trend in Local Area Network Utilization, Luh-Maan Chang and Li-Chung Chao, ME Jan. 92, p27-39.

True Costs, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1095-1100.

Two Paradigms for OOP Models for Scientific Applica-tions, T. J. Ross, J. P. Morrow, L. R. Wagner and G. F. Luger, (Computing in Civil Engineering and Geograph-ic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p535-542.

Urban Transit Guides Application of Advanced Train Control, Sesto Vespa and Tom Parkinson, TE Jan./Feb. 92, p146-159.

The Use of Computers as an Aid to Modular Learning in Civil Engineering, Richard N. Palmer and Gregory R. Miller, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p364-367.

ed. and Jeff R. Wright, ed., 1992), p364-367. Use of GIS Technology for the Analysis and Visualization of Arsenic Concentration in Soils, Irene Findikaki, (Computing it Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p443-451. Users' Groups, Satinder P. S. Puri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1022-1030.

Using Computers to Competitive Advantage: Philosophy and Example, Philip C. Terry, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1105-1112.

Using the ORIGEN2 Computer Code for Near Core Activation Calculations, A. T. Luksic and B. D. Reid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 982-87.

Utilization of ORIGEN2 by the Characteristics Data Base, Tim D. Welch and Karl J. Notz, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-

Water-Quality Modeling for Decision Making, G. T. Or-lob, WR May/June 92, p295-307.

Water's New World, Laura Lang, CE June 92, p48-50.

## Computer graphics

Computer Aided Design for Deep Water Offshore Risers, C. P. Johnson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p243-257.

Computer Graphics in Detailing Strut-Tie Models, Abdulsalam Alshegeir and Julio Ramirez, CP Apr. 92, p220-232.

Computer Support for Water Quality Management in San Diego Bay, A. E. Bale and G. T. Orlob, (Water Resourc-es Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p176-181.

Construction Applications of Relational Data Bases in Three-Dimensional GIS, Amr. A. Oloufa, C. Sapacostas and Reynaldo Espino, CP Jan. 92, p72-84.

Construction in 3-D, CE Feb. 92, p12.

Constitution in 50, CePeo 32, pt.2.

Decision Support System for Multiobjective Service Route Design, Jin-Yuan Wang and Jeff R. Wright, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

Developing Infrastructure Lifecycle Solutions, Steven B. Glimpse and Jeffrey M. Young. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p818-824.

Feedback Mechanisms for Operational Simulation, Amr A. Oloufa and Keith C. Crandall, CP Apr. 92, p161-

Finite Element Analysis in Geotechnical Engineering, Jonathan D. Bray, Ross W. Boulanger, Soon Hue Chew and Raymond B. Seed, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417.

Graphical Post-Processor for CE-QUAL-W2, Paul M. Craig, Kenneth C. Black and Robert E. Yager, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed. Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p61-71.

Graphics-Based Site Information Management at Han-ford TRU Burial Grounds, Samuel R. Rod, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

p450-457.

Interactive Slope Analysis Using Spencer's Method, Sunil Sharma and Abdul Moudud, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p506-520.

Lagrangian Transport Simulation Using Video Images to Store and Retrieve Parameters, Poojitha D. Yapa and Jay B. Perry, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p13-25.

Recent Experiences in PC Software Development, Kenneth M. Will, Asquith Bailey and Timothy Dodd, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1195-1203.

Soft Touch People Mover Central Control, R. D. Milnes, R. S. Fahringer and J. B. Bojarski, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p199-206.

Testing Pavement Image Processing Systems: An Engineering Approach, Matthew O. Ward, Tahar El-Korchi, Norman Wittels and Michael A. Gennert, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p41-62.

Computer hardware
Construction Applications of Vision Systems, Gary R.
Smith, H. Randolph Thomas and William Gleba,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p476-483.

Geotechnical Data Management: A GIS-Based Approach, Amr A. Oloufa and Ahmed A. Eltahan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p590-597.

On Distributed Processing Applications in Finite Element Analysis, Edward J. Plaskacz, Martin R. Ramirez and Sanjeev Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p107-

110.
Planning for Construction Automation by Integrating Information Flow with Software and Hardware Controls, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992.), p856-863. Real-Time Integrated Computer-Aided Instruction, Jorge A. Vanegas, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992.), p81-88.
True Costs, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992.), p1095-1100.
Use of Multimedia in a Sophomore Design Course, Mark

1992), p1095-1100.
Use of Multimedia in a Sophomore Design Course, Mark L. Valenzuela, Gregory G. Deierlein and Richard N. White, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p229-236.
Using Geographic Information Systems for Traffic Control Inventory Management, Gary S. Spring, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1-8.

Computer languages
Object-Oriented Programming for Scientific Codes. I:
Thoughts and Concepts, T. J. Ross, L. R. Wagner and
G. F. Luger, CP Oct. 92, p480-496.

Object-Oriented Programming for Scientific Codes. II: Examples in C++, T. J. Ross, L. R. Wagner and G. F. Luger, CP Oct. 92, p497-514.

Computer models

3D Analyses of Complex Buildings on Micros, Istvan Kadar and Ricardo A. A. Todeschini, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p551-557.

3D Inelastic Dynamic Analysis of RC Structures, Roy F. Lobo, Sashi K. Kunnath and Andrei M. Reinhorn, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p905-912.

Addressing Bridge Scour When Funding Falls Short, John N. Paine, Robert J. Leedy, Jr. and James N. Wigfield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p204-209.

Analytical Hydraulic Modeling of Road Culverts, Rohin

Analytical Hydraulic Modeling of Road Culverts, Rohin S. Saleh and Ralph Hwang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992).

p/98-803.
Aspects of Parallel Processing in Reservoir Simulation, Richard Ewing, Patrick O'Leary and James Sochacki, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p111-114.
Comparison of Model and Field Results for Barbers Point Harbor, Michael J. Briggs, Linda S. Lillycrop and David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p387-399.
A Computational Berthing Model for the Design of Fend-Acomputational Berthing Model for the Design of Fend-

A Computational Berthing Model for the Design of Fender Systems, John R. Headland, (*Ports '92*, David Torseth, ed., 1992), p480-492.

Computer Analysis of the East Huntington Cable-Stayed Bridge, Hany J. Farran and William Lai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p687-694.

Computer Model Aids Water Planning, CE July 92, p28.

Computer Modeling Analysis for Highway Steel Bridge Vibration, Ton-Lo Wang, Mohsen Shahawy and Dong-zhou Huang, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p679-686.

Computer Modeling of Forced Mixing in Waste Storage Tanks, L. L. Eyler and T. E. Michener, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p636-642

Computer Modeling of Structural Systems for Residential Scale Buildings, Richard A. Ebeltoft, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

Computer Modeling Responsibilities for Municipalities, Michael L. Deas, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p338

Computerized Transportation Planning Models for Site Impact Analysis: Precision or Complexity? Edward A. Mierzejewski and Timothy Jackson. (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p128-132.

Corridor Planning and Traffic Assessment: Small Sites and Neighborhoods, Marsha Anderson and Diane Simpson-Colebank, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p190-194.

Kouphall, ed. and 1. C. Sutaria, ed., 1992., p130-194.

A Description of LANDSIM and Its Uses, Thomas S. Russell, Jr., Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitter and Michael E. Zientek, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941.

Design Aids for Reinforced Concrete Columns, Bao-Jun Sun and Zhi-Tao Lu, ST Nov. 92, p2986-2995.

Design Criteria for an Underground Lunar Mine, John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 183-1194.

Drainage Analysis Using Triangulated Irregular Net-works, Norman L. Jones and James Nelson, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p719-726.

Evacuation Modeling Near a Chemical Stockpile Site, Donald E. Newsom, Marc A. Madore and Robert T. Jaske, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p180-184.

aust 1. V. Sutaria, ed., 1992), p180-184.
Evaluation of Dewatering and Treatment System at the
Chisman Creek Superfund Site, Precha Yodnane, Denis W. Okorn and Burton M. Marshall, (Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p250255.

Gearing up for the Deluge, CE Oct. 92, p8.

Graphical Object-Oriented Simulation System for Construction Process Modeling, L. Y. Liu and P. G. Ioannou, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1139-1146.

HEC-2 Water Surface Profiles Program, Vernon Bonner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p866-871.

Hydraulics of Dams from a Military Perspective, Ralph A. Wurbs, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p701-706.

Hydrologic Investigation of the April, 1983 Flooding in New Orleans, Louisiana, Michael A. Ports, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p260-267.

An Integrated Representation of Form, Function and Be-havior in Structural Engineering, D. H. Douglas Phan, Jamal A. Abdalla and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p394-401.

The International CHEMVAL Project: Verification and Validation of Geochemical Models, D. Read and T. W. Broyd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1421-1428.

Irrigation Land Management Model, Roy A. Steiner and Andrew A. Keller, IR Nov./Dec. 92, p928-942.

Knowledge Based-Object Oriented Primitive Work Item Generation, Joon Won Lee, Francois Grobler and M. Kevin Parfitt, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p959-966.

Lateral Analysis of Piers Constructed on Slopes, Moham-med A. Gabr and Roy H. Borden, GT Dec. 90, p1831-

Machine Learning in Planning and Control, Shaopei Lin, Zhenyi Zhao and Yingiina Scong, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 991-998.

Mesh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p323-328.

Modeling and Simulating Learning Development in Con-struction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Modeling of a Large-Scale Water Distribution System, Nien-Sheng Hsu, Peter W. F. Louie and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p598-603.

Multilayered, Priority-Based Simulation of Conjunctive Facilities, Elizabeth S. Andrews, Francis I. Chung and Jay R. Lund, WR Jan./Feb. 92, p32-53.

Network Model Analysis of Traffic Patterns Resulting from a Proposed Regional Mall, Stephen Lawe, Norman Marshall and Peter Ryner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p89-93.

Neural Network for Predicting Concrete Strength, Trefor P. Williams, Anil Khajuria and P. Balaguru, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1082-1088.

Neural Network-based Modeling of Composite Material with Emphasis on Reinforced Concrete, X. Wu and J. Ghaboussi, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry Goodno, ed. and Jeff R. Wright, ed., 1992), p1179-

Neural Networks and their Applicability within Civil En-gineering, James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1155-1162.

OUTFL—A Spreadsheet for Design of Adequate Storm Drainage Outfalls, Oner Yucel and Edward L. Lowman, (Hydraulic Engineering: Saving a Threatenet Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p707-712.

Palm Beach County Traffic Impact Analysis—A Proto-type, Joseph B. Pollock, Jr. and Jacob Wattenberg, (Site Impact Traffic Assessment: Problems and Solu-tions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p104-108.

Path-Finder: Al-Based Path Planning System, A. A. Morad, A. B. Cleveland, Jr., Y. J. Beliveau, V. D. Fransisco and S. S. Dixit, CP Apr. 92, p114-128.

A PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Eoin Howlett and Daniel L. Mendelsohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500.

Physical and 2-D Computer Models of Skimmer Curtain Effects on Lewiston Reservoir and Outlet Temperatures, Russ T. Brown, Gus Yates and Perry Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), p507-513. Pine Creek Tidal Hydraulic Study, James G. MacBroom and Edward Hart, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1154-1158.

Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1154-1158.

Rainfall-Runoff Relations for the Puget Sound Area, R. S. Dinicola, Hlydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p890-894.

Researchers Search for Pearls of Wisdom, CE May 92, p8. Sensitivity of HMR-51/52/PMP-Based Probable Maximum Flood (PMF) to Basin Lag and Land Use, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p895-899.

Session Report—Risk Management Software, William Rowe, (Risk-Based Decision Making in Water Resource st. Y. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p346-347.

Simulation of Reservoir Operation Using Smart Reservoirs, Jon S. Behrens, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992).

Site Impact Analysis Using the Tranplan Computer

p606-613.

Site Impact Analysis Using the Tranplan Computer Model, Robert B. Hearn and L. P. Ledet, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p82-83.

Spatial and Temporal Aspects of Qualitative Structural Reasoning, David I. Schwartz and Stuart S. Chen, (Computing in Civil Ingineering and Geographic Information Systems Symposium, Barry J. Goodino, ed. and Jeff R. Wright, ed., 1992), p277-284.

Structural System Control Using Neural Networks, Daniel R. Rehak and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p864-871.

Study Under Way on Railroad-Bridge Fatigue, CE Nov. 92, p19,21.

92, p19,21.

92, p19,21.

Survey of and Classification Criteria for Most Commonly Used Groundwater Models, Lakshmi N. Reddi, C. Harold Emmett, Daniel E. Medina and R. Lee Peyton, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p575-580.

Temporary Tunnel Excavation Support by Chemical Grouting, Francis B. Gularte, Gary E. Taylor and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Jura, ed., 1992), p423-435.

Tuned Mass Dampers for Balcony Vibration Control, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p723-740.

Use of Groundwater Models to Simulate Permedications

p723-740. Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Randall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-

Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, Dennis L. Corwin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p152-157.

Search of Solutions, Ted Engman, ed., 1992), p152-157.

Using Computer Models in Site Impact Assessment,
James G. Douglas, (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Passwell, ed., Naguria Rouphail, ed. and T. C. Sutaria, ed., 1992), p123-127.

Using Simulation Software to Build Conceptual Models in Civil Engineering, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244.

1992), p.23-2-2-2-2. Using Traffic Network Models to Assess Site Impact Traffic, Steven B. Colman and Michael N. Aronson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p118-122.

Wave Front Behavior in Adsorption Reactors, Federico Vagliasindi and David W. Hendricks, EE July/Aug. 92, p530-550.

po30-330.
Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, Walid Y. Thabet, Ayman A. Moradand Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p727-736.

WSPRO, A Model for Water-Surface PROfile Computa-tions, James O. Shearman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

1992), p865.

Assessing the Potential of E-Mail for Engineers: Case Study, F. Safayeni, A. Yu, L. Purdy and E. Lee, ME Oct. 92, p346-361.

The Software License Minefield, Software Publishers Association, CC June 92, p6-8,14-15.

Data Abstraction in Engineering Software Development, John W. Baugh, Jr. and Daniel R. Rehak, CP July 92, p282-301.

A Distributed Particle Simulation Code in C++, David W. Forslund, Charles Wingate, Peter Ford, J. Stephen Junkins and Stephen C. Pope, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518.

Ethics and Pitfalls, Jack P. Norris, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 101-1104.

Expert Systems for Civil Engineers: Knowledge Represen-tation, Robert H. Allen, ed., 1992, 0-87262-892-2,

Is Advanced Technology "The Gateway to Irresponsibility?", Jon E. Zufelt, El Oct. 89, p434-437.

Object-Oriented Approaches for Integrated Engineering Design Systems, Richard Sause, Kirk Martini and Gra-ham H. Powell, CP July 92, p248-265.

Object-Oriented Programming, Walid T. Keirouz, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p80-103.

Object-Oriented Programming for Scientific Codes. I: Thoughts and Concepts, T. J. Ross, L. R. Wagner and G. F. Luger, CP Oct. 92, p480-496.

Object-Oriented Programming for Scientific Codes. II: Examples in C++, T. J. Ross, L. R. Wagner and G. F. Luger, CP Oct. 92, p497-514.

On Distributed Processing Applications in Finite Element Analysis, Edward J. Plaskacz, Martin R. Ramirez and Sanjeev Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p107-110

Parallelism, Object Oriented Programming Methods, Portable Software and C++, I. G. Angus, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p506-513.

A Primer for the Analysis of Composite Beams, E. C. Oguejiofor, M. U. Hosain and Jianing Ju, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1212-1219.

Statically Determinate Trusses Programmed in Logic, Vlasis K. Koumousis and Panos G. Georgiou, CP Oct. 92, p435-455.

Computer programming languages

A Distributed Particle Simulation Code in C++, David W. Forslund, Charles Wingate, Peter Ford, J. Stephen Junkins and Stephen C. Pope, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518.

Experiences in Using C++ to Develop a Next Generation Strong Shock Wave Physics Code, James S. Peery and Kent G. Budge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p527-534.

Knowledge Representation in Water Resource Management Using Prolog and Natural Language, Richard N. Palmer and Lynn Spence, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p144-160.

A Lisp Based Expert System Tool, K. M. Sakr and M. U. Hosain, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p888-895.

GOOGIO, ed. and Jett K. Wright, ed., 1972.j, pose-272.
Massively Parallel Computing, C++ and Hydrocode Algorithms, Allen C. Robinson, Arlo L. Ames, H. Eliot Fang, Dino Pavlakos, Courtenay T. Vaughan and Philip Campbell, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodino, ed. and Jeff R. Wright, ed., 1992), p519-526.

Object-Oriented Finite Element and Graphics Data-Translation Facility, Jamal A. Abdalla and C. John Translation Facility, Jamal Yoon, CP July 92, p302-322.

Object-Oriented Model of Engineering Design Standards, James H. Garrett, Jr. and M. Maher Hakim, CP July 92, p323-347.

Object-Oriented Programming in Robotics Research for Excavation, Darcy M. Bullock and Irving J. Oppenheim, CP July 92, p370-385.

heim, CF July 74, p310-362.

Parallelisation of a Distinct Element Stress Analysis Program, Siong K. Tang, Gregory K. Egan and Michael A. Coulthard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p770-777.

PREPS: Analysis of Pipe Supports and Other Structures on the PC-386, Gregory Nakhimovsky and Charles E. Doherty, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p543-550.

Two Paradigms for OOP Models for Scientific Applica-tions, T. J. Ross, J. P. Morrow, L. R. Wagner and G. F. Luger; (Computing in Civil Engineering and Geographi-ic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p535-542.

ter programs

Acquisition Issues, George W. Lackowitz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p.1031-1035.

Analysis of a Wharf for a Container Terminal, Luis Hernández Toca and José A. Arréllaga, (Ports '92, David Torseth, ed., 1992), p228-237.

Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1094-1099.

BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, Oner Yuedt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906-911.

Buckling Analysis of Structures Composed of Tapered Members, Siu Lai Chan, ST July 90, p1893-1906.

Cathodic Protection Diagnostics for Corrosion Mitiga-tion of Infrastructure Components, Vicki L. Van Blari-cum, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 37-144.

Comparison of Two Conceptual Models of Flow Using the TSA, Michael L. Wilson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p882-890.

A Computer Program for the Analysis of Reinforced Soil, F. Reyna, D. Humphrey, B. Christopher and J. L. Chameau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1225-1236.

Concrete Box Sections Under Biaxial Bending and Axial Load, Cengiz Dundar, ST Mar. 90, p860-865.

Container Terminal Gates Flexible Design for a Dynamic Environment, Larry Nye, (Ports '92, David Torseth, ed., 1992), p912-925.

DARWin<sup>IIII</sup>—AASHTO's New Pavement Design Pro-gram, David G. Peshkin, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p301-308.

Design of Oak Point Link Railroad Trestle, Eugene Polner and Kim Plumacher, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809.

Development of Computer Automated Bridge Inspection Process, S. S. Kuo, Thomas E. Davidson and Leonard M. Fiji, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p794-801.

Dry Creek Watershed Flood Control Plan: A Case Study, Eric S. Clyde, M. N. Saquib and Dennis J. Huff, (Water Resources Planing and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p287-292.

Estimating Earth Pressures Due to Compaction, J. M. Duncan, G. W. Williams, A. L. Sehn and R. B. Seed, GT Dec. 91, p1833-1847.

Ethics and Pitfalls, Jack P. Norris, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 101-1104.

Experience With an Educational Package on Radioactive Waste Management in a Country Having no Nuclear Power Programme, P. Krejsa and G. Ehrenstrasser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1491-1493.

An Experimental Model Using a Graphical User Interface, David G. Kleinschmidt and Bryan R. Pearce, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p36-47.

Finite Element Simulation of Behavior of Laterally Load-ed Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Glueware, Brian Brenner and Cynthia Gagnon, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.1220-1225.

Guide to Evaluating Engineering Software: Program Documentation (book review), Philip Terry, CC Mar. 92,

Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

HEC-2 Water Surface Profiles Program, Vernon Bonner, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p866-871.

Integrated Drainage Design, Bernard L. Golding, CC Dec. 92, p1-6.

ITS-CONCRETE: A Functional Description, H. Gordon Thompson, II. and Nelson C. Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p222-228.

Co., 1772), PLEZE-ELO.
LASSAP, Stress and Settlement Analysis and Design Program, Clarence Jiang, K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), P426-433.

Method to Inhibit Technetium Migration in a Geologic Repository, VirLynda Statler and William H. Ellis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1985-1990.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

New Tools to Aid in Scientific Computing and Visualiza-tion, Michael G. Wallace and Tracy L. Christian-Freat, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p462-468.

A. Merrill and Sharon B. Garner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p921-928.

Nonlinear Dynamic Analysis of RC Structures with Pre-cast Cladding Using GT-IDARC, Loai El-Gazairty, Barry Goodno and James Craig, Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p896-904.

Open-Channel Flow Algorithm in Newton-Raphson Form, John N. Paine, IR Mar./Apr. 92, p306-319.

Optimum Design of Composite Hybrid Plate Girders, Balaur S. Dhillon and Chen-Hsing Kuo, ST July 91, p2088-2098.

p.008-2096.

Recent Experiences in PC Software Development, Kenneth M. Will, Asquith Bailey and Timothy Dodd, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1195-1203.

Jett R. Wright, ed., 1992.), p1195-1203.
Sequential Versus Distributed Constraint-Based Approach to Structural Design Automation: A Comparative Study, Sivand Lakmazaheri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992.), p261-268.

SOA: Large Strain Consolidation Predictions, F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243.

A Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p25-32.

Solving Circular Curve Using Newton-Raphson's Meth-od, Chun-Sung Chen and Lih-Shinn Hwang, SU Feb.

26, 164-75.
Use of Interactive Simulation Environments for the Development of Negotiation Tools, Allison M. Keyes and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 265-73.

User Interface for Pipe Network Program, István Lippai, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1049-1054.

User-Friendly PC-Based Design Package for Gravity-Type Seawalls, K. W. Chau, WW May/June 92, p267-279.

Users' Groups, Satinder P. S. Puri, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 022-1030.

UTEXAS3 Example Problems, Earl V. Edris, Jr. and Dale F. Munger, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066.

Validation of the TEXSAN Thermal-Hydraulic Analysis Program, S. P. Burns and D. E. Klein, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p799-804.

Computer software

ASHTO Bridge Design System—An Engineering Software with Formal Database Management, Roy A. Imbsen and Toorak Zokaie, (Computing in Civil Engineering and Geographic Information Systems Symposium. Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p663-670.

ADICPR Version 1.40, Bernard Golding, CC Jan. 92, p1,4-6.

Advanced Software Design and Standards for Traffic Sig-nal Control, Darcy Bullock and Chris Hendrickson, TE May/June 92, p430-438.

ASG COGO, Brian Brenner and Dennis Njuguna, CC Mar. 92, p1,4-6.

Automated Diffusion Wave Modeling of Watershed Hydraulics, Robert N. Eli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p353-354.

Bargain Package for Smaller Structures, David Angelotti, CC July 92, p1-9.

A Benchmark Slope Stability Study, Jose L.M. Clemente, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1520.

Better Use of Computer Resources, Ray Arthur Pixley, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1015-1021.

BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906-911.

Buyer Beware: Pinning Liability on Vendors is Virtually Impossible for Now, CC Oct. 92, p4-5.

Computer Aided Design for Deep Water Offshore Risers, C. P. Johnson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p243-257.

Computer Codes for Modeling Multi-Phase Flow and Transport in the Subsurface, Paul K. M. van der Heijde, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Pnnings, ed. and Nani G. Bhowmik, ed., 1992), p31.

Computer Design Failure: Who Pays? Tracy Lenocker, CC Oct. 92, pl-3,6-7.

Computer Vendor-User Relationships, Constantine N. Tonias and Elias C. Tonias, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1007-1014.

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Computer-Aided Support for Water Quality Modeling of the Russian River, John F. DeGeorge and Gerald T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p182-187.

Computerized Solution for Signalized Intersection Service Volumes, James W. Epps, TE July/Aug. 92, p496-

- Construction Applications of Vision Systems, Gary R. Smith, H. Randolph Thomas and William Gleba, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p476-483.
  Criminal Engineers: Engineers Who Prefer Pirating to Purchasing Will Pay the Price, CC Oct. 92, p10-11.
- Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p355-
- Customizing CADD Software, Robert M. Pasley, CC Aug. 92, p7-9.
- Cut and Fill Calculations by Modified Average-End-Area Method, James W. Epps and Marion W. Corey, TE Sept./Oct. 90, p683-689.
- DARWin<sup>tm</sup>—AASHTO's New Pavement Design Program, David G. Peshkin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p301-308.
- Data Abstraction in Engineering Software Development, John W. Baugh, Jr. and Daniel R. Rehak, CP July 92,
- p282-301. A Department's Perspective on Computer Education, Rafael G. Quimpo and Joel I. Abrams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p73-80.
- Design of Oak Point Link Railroad Trestle, Eugene Pollner and Kim Plumacher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809.
- The Design/Build Advisor System: Integration of Data-bases with a Knowledge-Based System, Annette L. Stumpf and Thomas R. Napier, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p930-938.
- Developing a Functioning Visualization and Analysis System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p846-83

Developments of Modelling Software for Civil Engineers, J. C. M. Dijkzeul, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p56-60.

ed., 1992), p56-60.

Drainage Analysis Using Triangulated Irregular Networks, Norman L. Jones and James Nelson, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p719-726.

Economical LRFD Composite-Beam Design from HESCO, John Cook and Roger Blais, CC May 92, p1-

Elastic Solutions for Arbitrarily Shaped Foundations, K. S. Li, GT June 92, p938-942.

S. Li, GT June 92, p938-942.
Environment for Educational Use of Professional Engineering Software, Richard Sause, John L. Wilson, Mark Tamaro and Brenda Wildrick, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p214-221.

1992), p214-221.
Estimation of Trave Related Inputs to Air Quality Models, Terry L. Miller, Arun Chalterjee, Jerry Everett and Cindy McIlvaine, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125.
ETBC: Interactive Software for Blaney-Criddle Estimates of Evapotranspiration, Ronald L. Elliott, Eldon L. Johns and Paul A. Weghorst, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p134-139.
Extended Experience with a Short-Term Hydropower

Ted Engman, ed., 1992), p134-139. Extended Experience with a Short-Term Hydropower Scheduling Model in New England, Paul H. Kirshen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p299-304.

A Facility for Training Space Station Astronauts, Ankur R. Hajare and James R. Schmidt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1645-1655.

p1645-1655.
Finise Element Analysis and Design of Bridges in a Distributed Computing Environment, C. A. Hudson and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wight, ed., 1992), p671-678.
Finite Element Analysis in Geotechnical Engineering, Jonathan D. Bray, Ross W. Boulanger, Soon Hue Chew and Raymond B. Seed, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417.
Geographical Information System (GIS) Technology in

p410-417.
Geographical Information System (GIS) Technology in Global Environmental Evaluation—An Overview, Robert C. Lozar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2104-2127.
A GIS for Land Management, Majed Khalfallah, Salah Benabdallah, Naceur Chemam and Rached M'Hadbi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p929-933.
GIS, Remote Sensing, and Master Water Plan: A Case Study, Uzair M. Shamsi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p695-702.
Glueware, Brian Brenner and Crethic Country, Computing, Columbia, Columbia,

p693-702.

Glueware, Brian Brenner and Cynthia Gagnon, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1220-1225.

Government Declares War on Pirates, CC Dec. 92, p14.

Guide for Evaluating Engineering Software: Organization Impact (Book Review), Philip Terry, CC Feb. 92, p2-

Guide for Evaluating Engineering Software: Software Use and User Qualifications (Book Review), Philip Terry, CC Jan. 92, p2-3.

Guide to Evaluating Engineering Software: Program Doc-umentation (book review), Philip Terry, CC Mar. 92, p2-3.

HEC-2 Shells and Tools, Cheryl Johnson, CC Apr. 92,

Highway Design in 3-D, Richard D. Sullivan, CE June 92, p68-70. Hydrology, Hydraulics and CAD, Peter J.R. Buttner, CC Dec. 92, p1,7-10.

Impact on Water Supply of a Seismically Damaged Water Delivery System, M. Shinozuka, H. Hwang and M. Murata, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p43-57.

18-3-7.

In This Corner...AutoCad Release 12 vs. Microstation PC
4.0, Ranjit Sahai, CC Sept. 92, p1-8.

Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374.

Instructional Modules for Tunnel Design and Constru

BROWHIK, ed., 1992), p369-374.
Instructional Modules for Tunel Design and Construction, Charles W. Schwartz, Herbert H. Einstein and Guillermo F. Salazar, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-375.

p. 106-373. Integrated Approaches for Costing Design Alternatives, Guillermo F. Salazar, Stephanie Foulke and Luigi Di-Monaco, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p848-855.

Integrated Software for Transportation Emissions Analysis, William Loudon and Malcolm Quint, (*Transportation Planning and Air Quality*, Roger L. Wayson, ed., 1992), p161-176.

1372, p.101-1. 138. Advanced Technology "The Gateway to Irresponsibility", Jon E. Zufelt, El Oct. 89, p434-437.
ITS-CONCRETE: A Functional Description, H. Gordon Thompson, II. and Nelson C. Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p222-228.

cu., 1992), p222-228.

LAN Ho! Structural Analysis on a Network, Suresh K.
Sharma and John W. Baugh, Jr., (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p639-646.

Landfills: Anatomy of Automated Design, Juan C. Vargas and David B. Porter, CE Mar. 92, p52-55. Legal Logistics of Software Evaluation, Philip Terry, CC Apr. 92, p1-3.

Legal Logistics of Software Evaluation, Philip Terry, CC May 92, p1,11-13. Liability Issues Featured in CECR, CE Oct. 92, p8.

Liability Issues reatured in Ceck, Ce Oct. 92, ps. Massively Parallel Computing, C++ and Hydrocode Algorithms, Allen C. Robinson, Arlo L. Ames, H. Eliot Fang, Dino Pavlakos, Courtenay T. Vaughan and Philip Campbell, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p519-526.

Goodno, ed. and Jeff K. Wright, ed., 1992), p519-526.
Measurement of Airfield Pavement Response Under
Moving Aircraft Loads, Dennis R. Hiltunen and Albert
J. Bush, III., (Road and Airport Pavement Response
Monitoring Systems, Vincent C. Janoo, ed. and Robert
A. Eaton, ed., 1992), p336-351.
The MIDUSS Touch, Ed Chamberland, CC June 92,

p1,10-14.

Modeling the Stiffness of Pile Group Foundations, Toorak Zokaie and Karl M. Romstad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p810-817.

Modular Robot Testbed, Chris Grasso, Wayne Jermstad, Mike Mathews, Jane Pavlich and Jim Avery, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453.

Miller, ed., 1992), p1443-1433.
NetCDF: A Public-Domain-Software Solution to Data-Access Problems for Numerical Modelers, Harry L. Jenter and Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p72-82.

Normal-Depth Calculations in Complex Channel Sec-tions, Edward D. Shirley and Vicente L. Lopes, IR Mar./Apr. 91, p220-232.

Object-Oriented Approaches for Integrated Engineering Design Systems, Richard Sause, Kirk Martini and Gra-ham H. Powell, CP July 92, p248-265.

Object-Oriented Finite Element and Graphics Data-Translation Facility, Jamal A. Abdalla and C. John Yoon, CP July 92, p302-322.

Object-Oriented Programming in Robotics Research for Excavation, Darcy M. Bullock and Irving J. Oppen-heim, CP July 92, p370-385.

Online Design Codes: An Integrated Approach, S. Malas-ri, J. C. Olabe and L. Y. Lin, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p285-292.

Optimum Design of Laminated Composites, R. S. Salzar, F. W. Barton and R. D. Ramsey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1323-1334.

h 132-1334.

An ORIGEN2 Update for PCs and Mainframes, Scott B. Ludwig, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p93-98.

ORIGNATE: PC Input Processor for ORIGEN-S, Stephen M. Bowman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p88-92.

Orthometric Heights from Global Positioning System, Jerome Fiedler, SU Aug. 92, p70-79.

An Ounce of Prevention: How to Stay Legal, CC Oct. 92,

Overview of AWARE: A Software Tool for Balancing Power and Nonpower Values in Water Resource Plan-ning, Jennie S. Rice, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p108-

Parallelism, Object Oriented Programming Methods, Portable Software and C++, I. G. Angus, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p506-513.

eu., 1974), p306-313.

A PC Modelling System for the Simulation of Transport and Fate of Solutes and Suspended Substances, A. Christina Ellegaard, Jesper Weiergang and Helmer M. Petersen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p188-201.

p188-201.

Planning for Construction Automation by Integrating Information Flow with Software and Hardware Controls, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p856-863.

The Potential Application of Military Fleet Scheduling Tools to the Federal Waste Management System Transportation System, I. G. Harrison, R. B. Pope, R. D. Kraemer and M. R. Hilliard, (High Level Radioactive Waste Management Program Committee, 1992), p1324-1329.

Prediction and Sensitivity of Recharges Due to Rainfall.

Prediction and Sensitivity of Recharges Due to Rainfall, Sampath K. R. Danda and Lakshmi N. Reddi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402.

PREPS: Analysis of Pipe Supports and Other Structures on the PC-386, Gregory Nakhimovsky and Charles E. Doberty, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p543-550.

A Primer for the Analysis of Composite Beams, E. C. Oguejiofor, M. U. Hosain and Jianing Ju, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992b, p1212-1219.

Wright, ed., 1924, p1612-129.
Wrogressive Integration of the Personal Computer Into an Undergraduate Civil Engineering Curriculum, Thomas A. Lenox and Terry D. Hand, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p65-72.

Ouantitative Risk Assessment and Technology Transfer: Software Developments, Charles Yoe, (Risk-Based De-ctsion Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p92-107.

Real-Time Integrated Computer-Aided Instruction, Jorge A. Vancgas, (Computing in Civil Engineering and Ge graphic Information Systems Symposium, Barry Goodno, ed. and Jeff R. Wright, ed., 1992), p81-88.

Recent Experiences in PC Software Development, Kenneth M. Will, Asquith Bailey and Timothy Dodd, (Computing it Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 195-1203. Regulations Spur Automated Hazmat Management, CE Feb. 92, p18-19.

Representing Building Product Information Using Hy-permedia, Sunil K. Evt, Sari Khayyal and Victor E. Sanvido, CP Jan. 92, p3-18.

SCS Water Surface Profile Model—WSP2, William H. Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p859-864.

Selecting Financial Manage O'Donnell, CC July 92, p14. ment Software, Sharon

Session Report—Risk Management Software, William Rowe, (Risk-Based Decision Making in Water Resourcest V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p346-347.

Sharing Waste Management Data Over a Wide Area Computer Network, William Menke and Paul Friberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p827–832.

mittee, 1992, pa2.7-8.2.

A Shell Approach to Modeling Oil Spill Trajectory and Fate and Search and Rescue Operations, M. L. Spaulding, E. Howlett, K. Jayko, E. Anderson and T. Isaji, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p157-174.

Shell/Toolkit for Multimedia Educational Applications, Boyd C. Paulson, Jr., Mohan Manavazhi, Hossam El-Bibany and Rafay Khan, (Computing in Civil Enginee-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1922), Barry J. 0 p348-355

p346-333.
The SIMBAT Software Package for Stochastic Interpolation of Ocean Wave Kinematics as an Aid in the Engineering Design of Large Floating Structures, Leon Borgman, David Shields, Robert Zueck and Warren Bartel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p385-606.

Site Mapping with 3DTM, Michael Lorczak, CC May 92,

Sizing Up Release 12, M. Kevin Parfitt, CC Aug. 92, p1,4-7.

The Software License Minefield, Software Publishers Association, CC June 92, p6-8, 14-15.

A Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p25-32.

ed., 1992), po-2-2.

Spatial Decision Support System for Toxic Spill Modeling in the Ohio River, Walter M. Grayman, Jason P. Heath and Richard M. Males, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p74-78.

Karamouz, ed., 1992), pr4-76.
STACE: An Integrated Code for Evaluating Spent-Fuel Transport Cask Containment, Kevin D. Seager, Philip C. Reardon and Peter R. Barrett, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e1263-1266. p1765-1769.

Standard Reference Evapotranspiration Calculations: REF-ET, Richard G. Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p140-145.

Strategies for Groundwater Model Application Through GIS, David S. Ward, Robert M. Greenwald and P. Srinivasan, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p32.

Surveying Advantage, Robert S. Williams, CC Aug. 92, pl-3,14.

TDHNET, Walter Grayman, CC Feb. 92, p1,4-5.

Tests on the Application of CAN-Q to Construction Process Modeling, Amaril Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p199-206.

Three Dimensional Models in CADD, Cynthia Gagnon and Brian Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p434-442.

Three-Dimensional Incompressible Flow Calculations with MacCormack's Method, Robert S. Bernard and Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p219-224.

Total Stress Analysis of Cantilever Sheetpiling in Layered Clay, Jay S. DeNatale and German A. Ibarra-Encinas, GT July 92, p1064-1082.

True Costs, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1095-1100.

Urban Transit Guides Application of Advanced Train Control, Sesto Vespa and Tom Parkinson, TE Jan./Feb. 92, p146-159.

The Use of Computers as an Aid to Modular Learning in Civil Engineering, Richard N. Palmer and Gregory R. Miller, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p364-367.

ed. and Jell R. Wilght, ed., 1972b, journey New Lyse of Multimedia in a Sophomore Design Course, Mark L. Valenzuela, Gregory G. Deierlein and Richard N. White, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.229-236.

Users' Groups, Satinder P. S. Puri, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1022-1030.

Using Geographic Information Systems for Traffic Con-trol Inventory Management, Gary S. Spring, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl-8.

Using Simulation Software to Build Conceptual Models in Civil Engineering, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244.

Validation of the TEXSAN Thermal-Hydraulic Analysis Program, S. P. Burns and D. E. Klein, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p799-804.

Versatile Data Managing, Amin Rahman, CC June 92, p1-6.

Watershed Models for Resources Management Decisions, Alan M. Lumb, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p884

WSPRO Files for Slope-Area Computations, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Ennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334.

Minimal Storage Finite Element Solution of Large-Scale Three-Dimensional Elastodynamic Problems, S. Has-sanzadeh, S. Foresti, H. Murakami and V. Sonnad, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p762-769.

Weather Advisor System for Construction Duration Esti-mation: Potential of Integrating KBS's and CD-ROM Databases, Diego Echeverry and Moonia P. Kim, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p833-840.

### Computer systems programs

Acquisition Issues, George W. Lackowitz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1031-1035.

### Computer techniques

Computerized Surveying Helps Egyptians Map Nile, CE May 92, p26-27.

Computerization
Geographic Information Systems—Evolutionizing the Decision Making Process, Dennis H. Klein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1204-1211.
Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.
Rapid Water Content by Computer-Controlled Microwave Drying, Paul A. Gilbert, GT Jan. 91, p118-138.
Soft Touch People Mover Central Control, R. D. Milnes, R. S. Fahringer and J. B. Bojarski, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p199-206.

Computerized control systems
Regulations Spur Automated Hazmat Management, CE
Feb. 92, p18-19.

omputerized design chieving Computer-Integrated Construction, Matt Syal, M. Kevin Parfitt and Jack Willenbrock, CC Aug. 92, p10-11.

p10-11.

An Agenda for AEC PDES Research, Jason P. Heroux, Douglas J. Peters, William J. Rasdorf and John W. Baugh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p376-385.

Al Supported Process Planning for Automated Rebar Fabrication, Md. Salim and Leonhard E. Bernold, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p872-879.

SACE'S Computing Newsletter Covers All Bases, CE Oct. 92, p68.

Boston's City within a City, Paul Tarricone, CE Oct. 92, p40-43.

p40-43.

CAD and the Corps, B. Ray Summerell, Kevin Carrigan and Jamie B. Wrenn, CE June 92, p52-54.

CADD Utilization in Residential Construction: From Subdivision Design to Dwelling Unit, M. G. Syal, C. McIntyre and J. H. Willenbrock, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p207-213.

A Comparison of Geographical Information Systems.

1992), p207-213.

A Comparison of Geographical Information Systems, Carl E. Kurt, Khurshid Mohyuddin and Bo Guo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p17-24.
Computer Aided Design for Deep Water Offshore Risers, C. P. Johnson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p242-257.
Computer Modeling of Structural Systems for Residential Scale Buildings, Richard A. Ebeltoft, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p58-65.

p58-65.

Computer Vendor-User Relationships, Constantine N. Tonias and Elias C. Tonias, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1007-1014.

1992), p1007-1014.
Construction Automation Work Classification, Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p500-505.
Controlling CADD Quality, CC Sept. 92, p11,13.
Customizing CADD Software, Robert M. Pasley, CC Aug. 92, p7-9.
DARWintm—AASHTO's New Pavement Design Program, David G. Peshkin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p301-308.
Design of Bridge Pier Pile Foundations for Ship Impact.

Design of Bridge Pier Pile Foundations for Ship Impact, Bogdan O. Kuzmanovic and Manuel R. Sanchez, ST Aug, 92, p2151-2167.

A Design Product Model for Computer Integrated Structural Engineering, Jerome Madden and Richard Sause, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p113-120.

Developing a Functioning Visualization and Analysis System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p846-851.

A Framework for the Documentation, Representation, and Processing of Design Standards, Nobuyoshi Yabuki and Kincho H. Law, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p97-104.

System, Yoram Reich, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p999-1006.

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Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p999-1006.
Highway Design in 3-D, Richard D. Sullivan, CE June 92, p68-70.
In This Corner...AutoCad Release 12 vs. Microstation PC 4.0, Ranjit Sahai, CC Sept. 92, p1-8.
Integrated Approaches for Costing Design Alternatives, Guillerno F. Salazar, Stephanie Foulke and Luigi Di-Monaco, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p848-855. Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.
Integrating the Undergraduate Engineering Curriculum, Alice M. Agogino and Anthony R. Ingraffea, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p356-363.
Knowledge Based-Object Oriented Primitive Work Item Generation, Joon Won Lee, Francois Grobler and M. Kevin Parfitt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p359-966.
Landfills: Anatomy of Automated Design, Juan C. Vargas and David B. Porter, CE Mar. 92, p52-55.
Linking Design Data with Knowledge-Based Construction Systems, H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753.

1992), p746-753.

Low-Cost Computer Techniques for Steel Truss Bridge Rehabilitation and Ratings, Robert H. Kim and Jai B. Kim, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p786-793.

Object-Oriented Approaches for Integrated Engineering Design Systems, Richard Sause, Kirk Martini and Graham H. Powell, CP July 92, p248-265.

An Operational Evaluation Process for Long-Duration Mission Habitatis in Space, M. Novara, E. Raffner and D. Antonelli, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Progressive Integration of the Personal Computer Into an Undergraduate Civil Engineering Curriculum, Thomas A. Lenox and Terry D. Hand, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p65-72.

Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice

Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352. Sizing Up Release 12, M. Kevin Parfitt, CC Aug. 92, p1,4-7. Solid Modeling of RC Beams: 1. Data Structures and Al-gorithms, M. A. Austin and J. L. Preston, CP Oct. 92, p389-403.

Solid Modeling of RC Beams: 2. Computational Environment, J. L. Preston and M. A. Austin, CP Oct. 92, p404-416.

p404-416. Spatial and Tension aim n. A. Austin, Cr Oct. 29, p404-416. Spatial and Temporal Aspects of Qualitative Structural Reasoning, David I. Schwartz and Stuart S. Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p277-284. Structural Design of Lunar Radio Telescope Using Interactive CAD, Ferhat Akgul, Walter H. Gerstle and Stewart W. Johnson, AS Jan. 92, p12-23. Structural Optimization in a Distributed Computing Environment, B. K. Voon and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p778-785.

Three Dimensional Models in CADD, Cynthia Gagnon and Brian Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p434-442.

Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert Logcher, CP Jan. 92, p85-105.

Trouble in Computer Paradise, Brian Brenner, CC Aug. 92, p12-13.

Use of Mathematical Programming Methods for Complex Systems, James G. Uber, E. Downey Brill, Jr. and John T. Pfeffer, WR May/June 92, p281-294.

User-Friendly PC-Based Design Package for Gravity-Type Seawalls, K. W. Chau, WW May/June 92, p267-279.

Water's New World, Laure Laur, CR. Laurel, Laure

Water's New World, Laura Lang, CE June 92, p48-50. Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, Walid Y. Thabet, Ayman A. Morad and Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p727-736.

Computerized scheduling
Achieving Computer-Integrated Construction, Matt Syal,
M. Kevin Parfitt and Jack Willenbrock, CC Aug. 92, p10-11.

Computerized simulation
Analysis of Corroded Reinforced Concrete Sections for
Repair, Ying-Su Yuan and Marton Marosszeky, ST
July 91, p2018-2034.

Automatic Generation of Simulation Codes in Construc-tion, Ali Touran, (Computing in Civil Engineering and Geographic Information Systems Symposium, Batry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1050-

Computer Simulated Flow of Grouts in Jointed Rock, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holitz, ed. and llan Juran, ed., den, ed., Robert 1992), p461-473.

1992), p461-473.
Computer Simulation of Direct Shear Test, Jeen-Shang Lin, John M. Ting, Baliso Vuba and Shiou Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p425-428.
Computer Simulation of Dry Layered Granular Flow Down an Incline Composed of Grains, Chi-Hai Ling and Chyan-Deng Jan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p760-763.

D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p760-763.

Computer Simulation of Granular Flows, Thomas G. Drake, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p752-755.

ET from Shallow Groundwater Maintained by Controlled-Drainage/Subirrigation System, James L. Fouss and James S. Rogers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p594.

A Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p320-323.

Finite Element Simulation of Behavior of Laterally Loaded Piles in Permafrox, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Honolulu Harbor Ship Traffic Simulation and Animation Study, James R. Walker, Vedat Demirel and Michael C. Leue, (Ports '92, David Torseth, ed., 1992), p868-883.

Leuke, (Foris 92, David Torsetti, ed., 1992), pose-883.
 Leakage Characteristics of the St. Jude Heart Valve, Theresa E. Brandner and Yi-Ren Woo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708.
 Modeling Stiffness Degradation in Filamentary Composite Materials, Robert M. Hackett and Kerry T. Slattery, MT May 92, p196-211.
 Modeling the Chaotic Behavior in Simple Shear Granular Flows, Jan-Olov Aidanpää, Hayley H. Shen and Ram Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1031-1034.
 Object Oriented Spacecraft Architecture, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2328-2337.
 Optimum Channel Contraction for Supercritical Flows, P. Rutschmann, O. F. Jiménez and M. H. Chaudhry, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p754-759.

Probabilistic Assessment of Composite Structures, Chris-tos C. Chamis and Michael C. -Y. Shiso, (Engineering Methanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p543-547. Restricting Rockfalls, Richard D. Andrew, CE Oct. 92,

Restricting Rockalls, Richard D. Andrew, C.E. Oct. 92, p66-67.

Roughness Measurements of Airfield Pavements, Elson B. Spangler, Anthony G. Gerardi and Hisso Tomita, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366.

Routing Debris Flows with Particle Segregation, Tamotsu Takahashi, Hajime Nakagawa, Tatsuo Harada and Yousuke Yamashiki, HY Nov. 92, p1490-1507.

Simulating THM Formation Potential in Sacramento Delta: Part I, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p513-529.

Simulating THM Formation Potential in the Sacramento Delta: Part II, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p530-542.

Variations in Curve Number for a Reclaimed AML Site, K. James Fornstrom and James L. Smith, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p389-394.

Computerized test methods

Search of Solutions, Ted Engman, ed., 1992), 938-394.
Computerized test methods
Characterization of Granular Material Composite Structures Using Computerized Tomography, Xiaogong Lee,
William C. Dass and Charles W. Manzione, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p268-271.
Computerized Tomographic Analysis of Fluid Flow in Fractured Tuff, C. W. Felice, J. C. Sharer and E. P. Springer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p296-299.
Geoelectrical Tomography: Model Studies Related to Nuclear Waste Site Characterization, Thomas E. Owen and Vernon R. Sturdivant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p304-307.
High-Resolution Interwell Seismic Experiments in Sedi-

1992), p.304-307.
High-Resolution Interwell Seismic Experiments in Sedimentary Formations, Jorge O. Parra and Brian J. Zook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.519-532.
Quantitative Stereology of Concrete Microracking, Kim D. Basham, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.123-126.

Computers
ASCE Newsletter Needs Reviewers, CE June 92, p11.
Coarse-Grain Parallel Computing Using ISIS Tool Kit,
Ralph Finch and Shao-Kong Kao, CP Apr. 92, p233-

Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, 0-87262-869-8, 1260pp.
Computing in Civil Engineering: Current Trends and Future Directions, Nelson C. Baker and Glenn J. Rix, El Apr. 92, p.139-155.

Apr. 92, p139-155.

Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163.

Is Advanced Technology "The Gateway to Irresponsibility?", Jon E. Zufelt, El Oct. 89, p434-437.

Keeping Computers from Crashing, CE Feb. 92, p12.

Machine Learning in Knowledge Acquisition, Tomasz Arciszewski and Wojciech Ziarko, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p50-68.

The Most Dangerous Technology Ever Built, CC Oct. 92, p8, 12.

ne Most Dangerous Technology Ever Built, CC Oct. 92, p8,12. A New Look for Computer Newsletter, CE May 92, p8. Salary for Computer Professionals Varies, CE Nov. 92, p10.

Trouble in Computer Paradise, Brian Brenner, CC Aug. 92, p12-13.

Application of NMR to Rotating Granular Flow, M. Nak-agawa and E. K. Jeong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p644-647.

p644-647. Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutanis Entering the Back River Waste Water Treatment Plant, George G. Balog and Ralph O. Cullison, III., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p145-150.

Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.

p477-494.
Use of GIS Technology for the Analysis and Visualization of Arsenic Concentration in Soils, Irene Findikaki, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p443-451.
Water Reduction as Justification for Permit Backsliding, Gary W. Siegel and Margaret L. Dwyer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156.

Concentration time
Fractal Concept Used in Time-of-Concentration Estimates, Gert Aron, James E. Ball and Thomas A. Smith, IR Sept./Oct. 91, p635-641.

Sampling of Wastewater Effluent, Heinz G. Stefan, Thomas R. Johnson and Hugh L. McConnell, EE Mar./Apr. 92, p209-225.

Adding Up Admixtures, Paul Tarricone, CE May 92, p48-51.

p48-51.

Analytical Modeling of Bonded Bars under Cyclic Loads,
Parviz Soroushian, Kienuwa Obasaki and Shashidhara
Marikunte, ST Jan. 91, p48-60.

Anchors in the Desert, Donald A. Bruce, William Fiedler
and Ronald Triplett, CE Dec. 91, p40-43.

Application of a Dolos Structural Design Procedure, Jef-

Application of a Dolos Structural Design Procedure, 92, frey A. Melby, (Coastal Engineering Fractice '92, Steven A. Hughes, ed., 1992), p830-846.
Backfill-Stiffened Foundation Wall Design, Robert Nicholls, GT Nov. 92, p1822-1836.
Bond Strength in Battened Composite Columns, Yasser M. Hunatti, ST Mar. 91, p699-714.

M. Hunaiti, ST Mar. 91, p699-714.

The Caisson Solution, Bennie L. Benjamin, Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47.

Compression Failure of Quasibrittle Material: Nonlocal Microplane Model, Zdeněk P. Bažant and Joško Ožboli, EM Mar. 92, p540-556.

Compressive Softening Model for Concrete, Eiji Mizuno and Shigemitsu Hatanaka, EM Aug. 92, p1546-1563.

Computational Gradient Plasticity, R. de Borst, H. -B. Mühlhaus and J. Pamin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p776-779.

Concrete Beam Testing with Optical Fiber Seneors D.

1992), p776-779.
Concrete Beam Testing with Optical Fiber Sensors, D. Huston, P. Fuhr, P. Kajenski and D. Snyder, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p60-69.
Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29.
Concrete for Sealing Voids in Rubble Structures, D. P. Simpson, B. D. Neeley and D. M. Walley, (Coastal Engineering Practice '92', Steven A. Hughes, ed., 1992), p847-861.
Concrete Surface Characterization Usine Ordical Marcol.

Concrete Surface Characterization Using Optical Metrology, Nora C. Sassenfeld and Michelle M. Crull, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p206-

Concrete-Face Rockfill Dam: I. Assessment (Paper intro-duced by J. Barry Cooke), James L. Sherard and J. Barry Cooke, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), 4944.

311.
Concrete-Face Rockfill Dam: II. Design (Paper introduced by J. Barry Cooke), J. Barry Cooke and James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p512-532.
Concrete-Faced RCC Dams, Ronnie M. Lemons, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p308-322.
Constitutive Model for Concrete in Strain Space, O. A. Pekau, Z. X. Zhang and G. T. Liu, EM Sept. 92, p1907-1927.
Constitutive Modeling for Material with Parfect Disconstitutive Modeling for Material with Parfect Disconstitutive Modeling for Material with Parfect Disconstitutive Modeling for Material with Parfect Disconstitution.

p1907-1927.
Constitutive Modeling for Material with Perfect Disordered Heterogeneity, X. Lee and C. S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Nieckwecki, ed., 1992), p445-448.
Construction Induced Vibration in Urban Environments, Barry M. New, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p212-239.

Crack Band Based Model for FEM Analysis of Concrete Structures, Grzegorz Gajer and Peter F. Dux, ST June 90, p1696-1714.

90, p1696-1714.
Creep Effects in Composite Beams with Flexible Shear Connectors, Angelo Marcello Tarantino and Luigino Dezi, ST Aug. 92, p2063-2081.
Creep Recovery of Prepacked Aggregate Concrete, Abu S. M. Abdul Awal, MT Aug. 92, p320-325.
A Critique of the Ultrasonic Pulse Velocity Method for Testing Concrete, S. Popovics and J. S. Popovics, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p94-103.

p94-103.
The Crown and the Curtain Wall, Dudley G. McFarquhar, CE Aug. 92, p62-65.
A Current Review of Experience with Asphaltic Concrete Impervious Membranes on the Upstream Slope of Earth and Rockfill Dams, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p10-29.

Sukhanander Singh, ed., 1992), p10-29. Damage Acsessment in Concrete Using Acoustic Emission, C. Ouyang, E. Landis and S. P. Shah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p3-2-4. Damage Mechanics Modeling of the Cyclic Behavior of Plain Concrete, S. Yazdani, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p377-380.

Damage of Concrete in Fatigue. A Alliche and D. Damage of Concrete in Fatigue.

Damage of Concrete in Fatigue, A. Alliche and D. François, EM Nov. 92, p2176-2190.

Dams Going Safely over the Top, R. Lee Wooten, George R. Powledge and Stephen L. Whiteside, CE Jan. 92,

p52-54.
Deformational Behavior of Fiber-Reinforced Concrete Beams in Bending, H. V. Dwarakanath and T. S. Nagaraj, ST Oct. 92, p2691-2698.
Discussion of The Optimum Gravity Dam by J. M. Raphael, Raymond E. Davis, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p20-21.
Ductile Multiple-Anchor Steel-to-Concrete Connections, Ronald A. Cook and Richard E. Klingner, ST June 92, p1645-1665.

p1043-1603.
Durability of MSW Fly-Ash Concrete, James R. Triano and Gregory C. Frantz, MT Nov. 92, p369-384.
Experimental Study of the Transient Temperature Distributions in Concrete, Paul C. Hoffman and Stanley K. Ciesielski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p200-

Expert System May Lead to Custom-Made Concrete, CE June 92, p30.

June 92, p.30.

A feasibility study for a Concrete Core Tomographer, A. M. Abdel-Ghaffar, R. M. Leahy, S. F. Masri and C. E. Synolakis, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p.37-48.

FEM Modeling of Ficititious Crack Propagation in Concrete, Walter H. Gerstle and Ming Xie, EM Feb. 92, p416-434.

Fiber Pullout and Bond Slip, I: Analytical Study, Antoine E. Naaman, George G. Namur, Jamil M. Alwan and Husam S. Najm, ST Sept. 91, p.2769-2790.

Finite Element Analysis of Cold Embedments in Fresh Concrete, Daniel P. Swift, Jay A. Puckett and Thomas V. Edgar, CR June 92, p41-57.

Finite Element Modeling of Concrete Expansion and

V. Edgar, CR June 92, p41-57.
Finite Element Modeling of Concrete Expansion and
Confinement, F. J. Vecchio, ST Sept. 92, p2390-2406.
Fracture Mechanics and Size Effect of Concrete in Tension, Tianxi Tang, Surendra P. Shah and Chengsheng
Ouyang, ST Nov. 92, p3169-3185.

Ouyang, ST Nov. 92, p3169-3185.
Fracture Surface Characterization of Concrete, M. A. Issa, A. M. Hammad and A. Chudnowsky, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130.
Frequency Spectrum Analysis of Ultrasonic Testing Signal in Concrete, Wei-Du Li, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p104-114.
Geometric Damage Tensor Based on Microplane Model Ignacio Carol, Zdenét P. Bažant and Pere C. Prat, EM Oct. 91, p2429-2448.
Government-Industry Cooperation: Fast-Track Concrete

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Homogeneous Structures Subjected to Repeated Structur-al System Changes, Luigino Dezi, Giovanni Menditto and Angelo Marcello Tarantino, EM Aug. 90, p1723-

and Angelo Martelio Farantino, Est Aug. 90, ph 123-1732.

Investigation of a Concrete Blistering Failure, R. S. Rol-lings and G. S. Wong, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30.

Investigation of L'Ambiance Plaza Building Collapse, Daniel A. Cuoco, David B. Peraza and Thomas Z. Scarangello, CF Nov. 92, p211-231.

Investigation of Parametrically-Induced Excitation in Concrete Columns, Nader Ghafoori and Kambiz Farhang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1051-1054.

A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Addi-tives, W. Virgil Ping and Thomas W. Kennedy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p206-215.

Microplane Model for Cyclic Triaxial Behavior of Con-crete, Jolko Ožbolt and Zdeněk P. Bažant, EM July 92, p136-1386.

crete, Joško Ožbolt and Zdeněk P. Bažant, EM July 92, pl365-1386. Mixing and Delivery of Roller Compacted Concrete, Robert Oury and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p242-257. MSW Incinerator Ash as Aggregate in Concrete and Masonry, Rosmadi Abdul Rashid and Gregory C. Frantz, MT Nov. 92, p353-368. Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992, 0-87262-887-6, 235pp. Numerical Simulation of Dynamic Shear Transfer, T.

87262-887-6, 235pp.
Numerical Simulation of Dynamic Shear Transfer, T.
Krauthammer and A. Koubaa, (Nondestructive Testing
of Concrete Elements and Structures, Farhad Ansari,
ed. and Stein Sture, ed., 1992), p139-149.
On the Modelling of Damage Due to Volumic Variations
in Cementitious Composites, Jacky Mazars and Jean
Pierre Bournazel, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p482-485

On the Role of Dispersive Waves in Strain-Softening Media, L. J. Sluys and R. de Borst, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,

cnanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p624-627.

One-Dimensional Model for Analysis of CRC Pavement Growth, Dapeng Xin, Dan G. Zollinger and Ray W. James, TE July/Aug. 92, p557-575.

One-Stop Shopping' at World of Concrete, CE Apr. 92, p12-13.

pil-13.
The Optimum Gravity Dam, Jerome M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p5-19.
Parametric Study of Continuous Prestressed Composite Girders, Wenxia Tong and Hamid Saadatmanesh, ST Jan. 92, p186-206.

p20-21.

Passive Acoustic Emission for Quantitative Evaluation of

Passive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Concretes, Michael A. Taylor, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl-12.

Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, Kwang W. Kim, Bong H. Lee, Jescon Park and Young S. Doh, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343.

343.
Prestressed Composite Girders. I: Experimental Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2743-2762.
Prestressed Composite Girders. II: Analytical Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2763-2783.
Prevention of Stress Relaxation in Viscoelastic Structures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

Put to the Test, Paul Tourney and Neal Berke, CE Dec. 92, p62-63.

92, po2-03.

Quantitative Stereology of Concrete Microcracking, Kim D. Basham, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl23-126.

Rate Effects in Uniaxial Dynamic Compression of Concrete, Tianxi Tang, Lawrence E. Malvern and David A. Jenkins, EM Jan. 92, pl08-124.

RCC Conference Traces Decade of Progress, CE Apr. 92,

Realistic Specifications for Manufactured Sand, Charles R. Marek, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., Deficiencies and 1992), p245-260.

Real-Time Condition Monitoring of Concrete Structures by Embedded Optical Fibers, Farhad Ansari, (Nonde-structive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p49-59. Reliability Analysis of Creep and Shrinkage Effects, C. Q. Li and R. E. Melchers, ST Sept. 92, p2323-2337.

Li and R. E. Meichers, ST Sept. 92, p2323-2337. Review and Evaluation of the Use of Microsilica as an Admixture in Concrete, Brett Gunnink and Fahad Alnowaiser, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p92-103. Review of NPP Concrete Degradation Factors and Assessment Methods, T. M. Refai and M. K. Lim, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p182-193.

p182-193.

Seattle Swings Again, Rita Robison, CE July 92, p46-49. Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsam, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p215-225.

The SHRP-LTPP Asphalt Resilient Modulus Pilot Study, William O. Hadley and Jonathan L. Groeger, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl 30-145.

Simulated Field Trials of Non-Destructive Concrete Test Methods for Highway Structures, John A. Bickley and Paul Read. (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p162-170.

Softening Models for Concrete: Stability and Uniqueness, Donald R. Curran, James K. Gran, Lynn Seaman and Tarabay H. Antoun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p369-

Stability of Concrete Gravity Dams with Drained and Fi-nite Cracks, Bernard Amadei and Tissa Illangasekare, EY Dec. 92, p149-163.

Statistical Analysis of Slender Composite Beam-Column Strength, S. A. Mirza and B. W. Skrabek, ST May 92, Strength, S. p1312-1332.

Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200.

Strain-Based Damage Deactivation in Concrete, N. R. Hansen and H. L. Schreyer, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p486-489.

Strength and Corrosion Resistance of Superplasticized Concretes, Mohammed Maslehuddin, Rasheeduzzafar and Abdulaziz Ibrahim Al-Mana, MT Feb. 92, p108-

Strength and Ductility of Confined Concrete, Murat Saatcioglu and Salim R. Razvi, ST June 92, p1590-

Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and H. Hawkins, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564.

Time-Dependent Analysis of Composite Steel-Concrete Sections, R. Ian Gilbert, ST Nov. 89, p2687-2705. Turning on the Waterworks, Donald E. Eckmann, CE Aug. 92, p48-51.

Use of Hierarchical Lattices for Predicting the Fluid or Stress Transfer in Concrete, D. Breysse, D. Fokwa and G. Schlatter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p171-174.

ed. and John M. Niedzwecki, ed., 1992, p.171-174.

Water Main Rehabilitation Using Silicote Lining, Steven
E. Cooper and Gregory C. Heitzman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p772-773.

Alkali-Silica Reactivity: An Overview of a Concrete Durabilty Problem, D. Stephen Lane, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p231-244.

California Plumbs Toilet Fixture Possibilities, CE Jan.

Compressive Strength and Characterization of Failure Modes for Polymer Concrete, S. Mebarkia and C. Vipulanandan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p988-991.

Concrete Construction on the Moon, T. D. Lin and Nan Su, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1359-1369.

Experimental Determination of the Relation Between the Damaged Zone and the Aggregate Size in Concrete Through Acoustic and Mechanical Techniques, D. Fokwa, Y. Berthaud and D. Breysse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p131-134.

Fracture Surface Characterization of Concrete, M. A. Issa, A. M. Hammad and A. Chudnovsky, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130.

Terminal Asphalt Patching: An Innovative Approach, C. Davis Rudolf, III. and George Degaraff, (Ports '92, David Torseth, ed., 1992), p836-848.

Concrete blocks

Behaviour of Prestressed Concrete End Blocks, T. J. Ibell and C. J. Burgoyne, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p135-138

138. Durability Failure of a Concrete Block Port Pavement, Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl-15.
Mobile Pilot Plant to Reuse Fly Ash in Concrete, CE Oct.

92, p18-19.

Concrete construction

Behavior of Externally Confined Concrete Columns, M.
W. Li, H. Saadatmanesh and M. R. Ehsani, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p677-690.

Concrete Construction on the Moon, T. D. Lin and Nan Su, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Millert, ed., 1992), p1359-1369.

Genesis: The Creation of a Lunar Base, Paul Bialla, Nathan Nottke and Seishi Suzuki, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Millert, ed., 1992), p13-24.

Non-Destructive Testing of Bridge, Highway and Alicentics.

24. Yon-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1121-1128.

Nonliear, Incremental Analysis of Olmsted Locks, Chris A. Merrill and Sharon B. Garner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed. 1992), p921-928.

Put to the Test, Paul Tourney and Neal Berke, CE Dec. 92, p62-63.

74., p02-03.
Steam Injection System for Lunar Concrete, Dennis M. Pakulski and Kenneth J. Knox, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1347-1358.

Concrete deterioration

Alkali-Silica Reactivity: An Overview of a Concrete Durabilty Problem, D. Stepben Lane, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p231-244.

Concrete Surface Treatments—A Selection Guide, P. James Bruner, Ir., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482.

Investigation of Concrete at a Middle East Plant, Jerome P. O'Connor, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p305-518.

Rehabilitation of Chloride Damaged Concrete, Christo-pher P. Hodges, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491.

Concrete durability
Alkali-Silica Reactivity: An Overview of a Concrete
Durability Problem, D. Stephen Lane, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p231-244.

Investigation of Concrete at a Middle East Plant, Jerome P. O'Connor, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p505-518.

Protected-Paste Volume of Air-Entrained Cement Paste. Part 1, K. Natesaiyer, K. C. Hover and K. A. Snyder, MT May 92, p166-184.

Reliability-Based Design for Feeeze-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9462-475.

Concrete, lightweight
High Strength, Low Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p363-372.

Concrete masonry

Flexural Tensile Strength of Partially Grouted Concrete

Masonry, Ahmad A. Hamid, Omar A. Elnawawy and
Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393.

Masonry as a Structural Material, Daniel P. Abrams,
(Materials: Performance and Prevention of Deficiencies

and Failures, Thomas D. White, ed., 1992), p116-129.

MSW Incinerator Ash as Aggregate in Concrete and Masonry, Rosmadi Abdul Rashid and Gregory C. Frantz,

MT Nov. 92, p353-368.

Concrete paver

Concrete parements
Alternative Airfield Pavement Quality Control, Raymond P. Rawe and Terry A. Ruhl, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p109-123.

Evaluation of Partial Depth Spall Repair Materials and Procedures, Arti J. Patel, David G. Peshkin and A. Russell Romine, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759.

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Measurement of Shock Pressure from FWD on a Con-

Measurement of Shock Pressure from FWD on a Concrete Pavement by Impedance-Matched Shock Gauge, Piyush K. Dutta and John Kalafut, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228. One-Dimensional Model for Analysis of CRC Pavement Growth, Dapeng Xin, Dan G. Zollinger and Ray W. James, TE July/Aug. 92, p557-575.

Performance of Epoxy-Coated Steel in Continuously Reinforced Concrete Pavement, Farrel J. Zwerneman, Rax C. Donahey, Hameed S. Syed and Srinivas R. Gunna, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p339-352.

p335-332.
Performance of Recycled Asphalt Concrete Materials in an Arid Climate, Mustaque Hossain and Larry A. Scofield, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p415-427.

p=13-=41.
Successful High Traffic Chip Seal Construction, Scott Shuler, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p186-205.

Thin 'Whitetop' Pavement Lives 30 Years in One, CE Nov. 92, p14.

Concrete piles

Forced Vibration Testing of an Expanded Base Concrete
Pile, Alex Sy and David Siu, (Piles Under Dynamic
Loads, Shamsher Prakash, ed., 1992), p170-186.

Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92,
David Torseth, ed., 1992), p214-227.

Field Test of 72-in.-Diameter Cast-in-Place Nonrein-forced Concrete Pipe, Curtiss W. Gilley, Lester H. Ga-briel and Robert S. Standley, TE Jan./Feb. 92, p1-19.

Lupahoche Harbor Planning, Design, & Construction, David A. Lau, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p320-336. Microtunneling Used for Deep Urban Construction, CE

Feb. 92, p26.

Concrete placing
Automation of Concrete Slab-on-Grade Construction,
Osama Moselhi, Paul Fazio and Stanley Hason, CO
Dec. 92, p731-748.

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Concrete, post-tensioned Analysis of Delamination of Post-Tensioned Silos, Judith J. Stalnaker and Mark D. Fugler, ST Apr. 92, p1014-1022

Evaluation of Concrete Bridges by Impact-Echo, Al Ghorbanpoor, Y. P. Virmani and G. R. Fatemi, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p82-93.
Performance of Viaduct Girders under Static and Dynamic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Concrete, precast Behavior of Concrete Hollow-Block Masonry Prisms under Axial Compression, T. P. Ganesan and K. Ramamurthy, ST July 92, p1751-1769.

Behavior of Isotropic R/C Bridge Decks on Steel Girders, I.-K. Fang, J. Worley, N. H. Burns and R. E. Klingner, ST Mar. 90, p659-678.

Corps Chooses Precast Panels for Lock Rehab, CE July 92, p19-20.

Design Concepts for a Lunar Concrete Production Facility, Richard M. Drake, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p34-42.

French System Tunnels Into Canada, CE Aug. 92, p10. PCA Seeks Concrete Bridge Candidates, CE Aug. 92, p8. Performance of Precast Driven Piles in Marine Clay, Chun F. Leung, R. Radhakrishnan and Siew-Ann Tan, GT Apr. 91, p637-657.

Performance of Viaduct Girders under Static and Dynamic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Sonic NDE of Structural Concrete, Larry D. Olson, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p70-81.

Concrete, prestressed

Aesthetic Design Philosophy Utilized for California State
Bridges, James E. Roberts, UP Dec. 92, p138-162.

Analysis of Delamination of Post-Tensioned Silos, Judith J. Stalnaker and Mark D. Fugler, ST Apr. 92, p1014-1022

Rehaviour of Prestressed Concrete End Blocks, T. J. Ibell and C. J. Burgoyne, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p135-

Bond Anchorage of Pretensioned FRP Tendon at Force Release, Antonio Nanni, Masaharu Tanigaki and Koi-chi Hasuo, ST Oct. 92, P2837-2854. Buckling of Suspended Cambered Girders, Walter L. Peart, Edward J. Rhomberg and Ray W. James, ST Feb. 32, p505-528.

Building Better Bridges: Concrete Vs. Steel, Clifford L. Freyermuth and Andy Johnson, CE July 92, p66-71. Direct Analysis of Prestressed Concrete Members, A. S. Prasada Rao, ST Dec. 90, p3432-3447.

Drying and Cracking Effects in Box-Girder Bridge Seg-ment, Zdeněk P. Bažant, Vladimír Křístek and Jan L. Vítek, ST Jan. 92, p305-321. High-Strength Concrete Tested in Bridge Girders, CE Sept. 92, p27-28.

Prestressed-Concrete Railway-Bridge Live-Load Strains, John F. Muller and Peter F. Dux, ST Feb. 92, p359-

Service Load Behavior of Concrete Members Prestressed with Unbonded Tendons, M. H. Harajli and M. Y. Kanj, ST Sept. 92, p2569-2589.
Shear Resistance Models for Concrete Bridges, Ahmed S. Yamani and Andrzej S. Nowak, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p809-811.

Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-

Concrete properties
Concreting at Subfreezing Temperatures, Charles J.
Korhonen, Edel R. Cortez and Brian A. Charest, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p382-397.

The Construction of New Victoria Dam, Australia, Robert J. Wark, Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed.,

Design of Miel II—A High RCC Dam, Alberto Marulanda, Fabio Amaya and Errates Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p83-98.

crete, J. Francis Young, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p737-739. The Microstructure of Hardened Cement Paste and Con-

Neural Network for Predicting Concrete Strength, Trefor P. Williams, Anil Khajuria and P. Balaguru, (Compuing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p1082-1088.

wright, ed., 1992, p1082-1088.
A New Probabilistic Model for the Fracture Toughness of Concrete, M. A. Issa, M. Gorelik and A. M. Hammad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p467-470.
Properties of Aggregate-Cement Interface for High Performance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p852-855.
A Theoretical Appropriate to Characterize Reinforced Concrete.

M. NIGUZWESI, CU., 1772, p.02-0-3.
A. Thooretical Approach to Characterize Reinforced Concrete Using Stress Waves, J. S. Popovics, J. L. Rose and A. Pilarski, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., Deficiencies and Failures, Thomas D. 1992), p492-504.

Use of the Break-Off Method for the Evaluation of High Performance Concrete, Tarun R. Naik and Amr S. Has-saballah, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p92-106.

3D Inelastic Dynamic Analysis of RC Structures, Roy F. Lobo, Sashi K. Kunnath and Andrei M. Reinhorn, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p905-912.

Jett R. Wright, ed., 1992, psu0-912.
Analysis of Circular RC Columns for Short- and Long-Term Deformations, Mark Andrew Bradford and R. Ian Gilbert, ST Mar. 92, p669-683.
Analysis of Corroded Reinforced Concrete Sections for Repair, Ying-Su Yuan and Marton Marosszeky, ST July 91, p2018-2034.

Analytical Moment-Curvature Relations for Tied Concrete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544. Arc-Length Method for Passing Limit Points in Structural Calculation, W. F. Lam and C. T. Morley, ST Jan. 92, p169-185.

Beam Strength Enhancement at Design Ductility Factor Demands, Gaetano Russo, ST Dec. 90, p3402-3416. Behavior of Externally Confined Concrete Columns, M. W. Li, H. Saadatmanesh and M. R. Ehsani, (Materialt: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p677-690.

Behavior of Isotropic R/C Bridge Decks on Steel Girders, I. -K. Fang, J. Worley, N. H. Burns and R. E. Klingner, ST Mar. 90, p659-678.

Bond Strength of Straight GFRP Rebars, S. Tao, M. R. Ehsani and H. Saadatmanesh, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p598-605.

Bridge Construction Goes Gently Down the River, CE Nov. 92, p23-26.

Complete Biaxial Load-Deformation Behavior of RC Col-umns, Gang Gary Wang and Cheng-Tzu Thomas Hsu, ST Sept. 92, p2590-2609.

Computer Graphics in Detailing Strut-Tie Models, Abdulsalam Alshegeir and Julio Ramirez, CP Apr. 92, p220-232.

p220-232.
Concrete Box Sections Under Biaxial Bending and Axial Load, Cengiz Dundar, ST Mar. 90, p860-865.
Constitutive Modeling of Slurry Infiltrated Fiber Concrete (SIFCON), David J. Stevens, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, 4 1007, 2007-208. ed., 1992), p992-995.

Corrosion Cracking in Relation to Bar Diameter, Cover, and Concrete Quality, Rasheeduzzafar, S. S. Al-Saadoun and A. S. Al-Gahtani, MT Nov. 92, p327-342.

Crack Analysis of Reinforced Concrete Tension Members, H. C. Chan, Y. K. Cheung and Y. P. Huang, ST Aug. 92, p2118-2132.
Crack Band Based Model for FEM Analysis of Concrete Structures, Grzegorz Gajer and Peter F. Dux, ST June 90, p1696-1714.

90, p1696-1714.

Cracking Response of RC Members Subjected to Uniaxial Tension, Gaetano Russo and Filippo Romano, ST May 92, p1172-1190.

Design Aids for Reinforced Concrete Columns, Bao-Jun Sun and Zhi-Tao Lu, ST Nov. 92, p2986-2995.

Design and Construction of a Bonded Fiber Concrete Overlay of CRCP (Louisiana, Interstate Route 10, August 1990), William M. King, Jr., William H. Temple and Steven L. Cumbas, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p353-362.

Design of RC Sections with Generic Shape under Biasial Bending, Andrea Dall'Asta and Luigino Dezi, ST Apr. 92, p1138-1143.

92, p1138-1143.
Detection of Cracks in Reinforced Concrete Cans, Christian Grosse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p413-416.
Direct Analysis of Prestressed Concrete Members, A. S. Prasada Rao, ST Dec. 90, p3432-3447.
Ductility and Detailing Requirements of Bearing Wall Buildings, John W. Wallace and Jack P. Moehle, ST June 92, p1625-1644.
An Evaluation Study of Modified Mohr-Coulomb and

An Evaluation Study of Modified Mohr-Coulomb and Cap Models, Hamdan N. Al-Ghamedy and Sahel N. Abduljauwad, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p717-720

Experimental Bridge Faces Heavy Loads, CE June 92, p29-30.

p29-30.
Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, J. Larralde, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654.
Fiber: Good For the Concrete Diet? William C. Panarese, CE May 92, p44-47.
Field Load Test on Full-Scale Reinforced Concrete Frame, Tso-Chien Pan, Siu Tee Wong, Hee Kiat Cheong and Kok Wai Phang, CF Aug. 92, p137-150.
Finite Element Model for Seismic RC Coupled Walls Having Slender Coupling Beams, Omar Chaallal, ST Oct. 92, p2936-2943.
Flexural Analysis of Reinforced Concrete Beams Con-

Flexural Analysis of Reinforced Concrete Beams Containing Steel Fibers, Byung Hwan Oh, ST Oct. 92, p2821-2836.

p2821-2836.
Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchors, O. Chaalial and B. Benmokrane, (Materials: Performance and Prevention of Descinencies and Failures, Thomas D. White, ed., 1992), p606-617.
Hybrid (FRP+Steel) Reinforcement for Concrete Structures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materials: Performance and Prevention of Descinencies and Failures, Thomas D. White, ed., 1992), p655-665.
Hysteretic Behavior of Anchorage Slip in R/C Members, Murat Saatcioglu, Jaber M. Alsiwat and Guney Ozcebe, ST Sept. 92, p2439-2458.
Hysteretic Response of Reinforced-Concrete Infilled

S1 Sept. 92, p2439-2438. Hysteretic Response of Reinforced-Concrete Infilled Frames, Sinan Altin, Ugur Ersoy and Tugrul Tankut, ST Aug. 92, p2133-2150. In-Plane Floor Deformations in RC Structures, Hassan S. Saffarini and Musa M. Qudaimat, ST Nov. 92, p3089-

Investigation of Concrete at a Middle East Plant, Jerome P. O'Connor, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p505-518.

1992), p505-518.

Investigation of the Behavior of Reinforced Plastic Columns with Concrete Core, Saeed Daniali, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p666-676.

Laupahoehoe Harbor Planning, Design, & Construction, David A. Lau, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p320-336.

Model for Optimal Design of Reinforced Concrete Beam, B. K. Chakrabarty, ST Nov. 92, p3238-3242.

Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, Ali M. Hamza and Antoine E. Naaman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p996-999.

Modeling Slab Contribution in Frame Connections, B. M. Shahrooz, S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494.

Sept. 74, px415-2494.

Neural Network-based Modeling of Composite Material with Emphasis on Reinforced Concrete, X. Wu and J. Ghaboussi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1179-1196.

Nondestructive and Destructive Testing of a Three Span Skewed R. C. Slab Bridge, R. A. Miller, A. E. Aktan and B. M. Shahrooz, (Nondestructive Testing of Con-crete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p150-161.

Nonlinear Cyclic Behavior of Reinforcing Bars Including Buckling, Giorgio Monti and Camillo Nuti, ST Dec. 92, p3268-3284.

p3268-3284.
 Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, Loai El-Gazairly, Barry Goodno and James Craig, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 896-904.
 Normal- and High-Strength Fiber-Reinforced Concrete under Compression, A. Samer Ezeldin and Perumalsamy N. Balaguru, MT Nov. 92, p415-429.
 Ohio Looks to Improve Bridge-Deck Performance, CE Oct. 92, p11.

Oct. 92, p11.

Oct. 92, p11.

One-Dimensional Model for Analysis of CRC Pavement Growth, Dapeng Xin, Dan G. Zollinger and Ray W. James, TE July/Aug. 92, p557-575.

Performance of Epoxy-Coated Steel in Continuously Reinforced Concrete Pavement, Farrel J. Zwerneman, Rex C. Donahey, Hameed S. Syed and Srinivas R. Gunna, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p339-352.

p339-332.

Performance of Viaduct Girders under Static and Dynamic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Predicting Behavior of Cyclically Loaded RC Structures, William K. Rule and Robert E. Rowlands, ST Feb. 92, p603-616.

Premature Failure of Externally Plated Reinforced Con-crete Beams, Deric John Oehlers and John Paul Moran, ST Apr. 90, p978-995.

Properties of Aramid-Fiber Reinforced Concrete and SIF-CON, Antonio Nanni, MT Feb. 92, p1-15.

Properties of Composites Using Recycled Plastics, Karim S. Rebeiz, David W. Fowler and Donald R. Paul, (Ma-S. Rebert, David W. Fowler and Donald R. Faut, (Na-terials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381. Rebar Corrosion in MgSO4 Solution, Mohammad Sham-im Khan and Abdul-Hamid J. Al-Tayyib, MT Aug. 92,

p292-299

p.532-439.

Reinforced Concrete Beams with Plates Glued to Their Soffits, Deric John Oehlers, ST Aug. 92, p2023-2038.

Reinforcement Anchorage Slip under Monotonic Loading, Jaber M. Alsiwat and Murat Saatcioglu, ST Sept. 92, p2421-2438.

Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079.

Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

162, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p956-959.
Seismic Behavior and Shear Strength of Framed Joint Using Steel-Fiber Reinforced Concrete, Jiuru Tang, Chaobin Hu, Kaijian Yang and Yongcheng Yan, ST Feb. 92, p341-338.

Seismic Response of Pacific Park Plaza. I: Data and Pre-liminary Analysis, M. Celebi and E. Şafak, ST June 92, p1547-1565.

ismic Response of R/C Frames with Irregular Profiles, Sharon L. Wood, ST Feb. 92, p545-566.

Sharon L. Wood, S1 Feb. 92, p343-366.
Shear Connectors in Composite Beams with Longitudinally Cracked Slabs, Deric John Oehlers and Sung Moo Park, ST Aug. 92, p2004-2022.
Shear Resistance Models for Concrete Bridges, Ahmed S. Yamani and Andrzej S. Nowak, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

1992), p809-811.

Softening and Snap-Through Behavior of Reinforced Ele-ments, C. Bosco and A. Carpinteri, EM Aug. 92,

Solid Modeling of RC Beams: 1. Data Structures and Algorithms, M. A. Austin and J. L. Preston, CP Oct. 92, p389-403.

Solid Modeling of RC Beams: 2. Computational Environ-ment. J. L. Preston and M. A. Austin. CP Oct. 92.

ment, J. L. Preston and M. A. Austin, CP Oct. 92, p404-416.
Splice/Development Length Requirements for FRP Grids Used in the Structural Reinforcement of Concrete, Edwin R. Schmeckpeper and Charles H. Goodspeed, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p632-644.
Sprayed-Zinc Galvanic Anodes for the Cathodic Protection of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p732-747.
Stochastic Modeling of Short Fiber Reinforced Composites—A Review, Jamshid Mohammadi and Artur S. Kurzydlo, (Probabilistic Mechanics and Structural and Geoiechnical Reliability, Y. K. Lin, ed., 1992), p479-482.

482.

Strength of Composite Slabs, W. Samuel Easterling and Craig S. Young, ST Sept. 92, p2370-2389.

Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.

A Theoretical Approach to Characterize Reinforced Concrete Using Stress Waves, J. S. Popovics, J. L. Rose and A. Pilarski, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p492-504.

Plying Back a Landslide, Stephen J. Klein, CF. Dec. 92

Tying Back a Landslide, Stephen J. Klein, CE Dec. 92, p40-43.

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Concrete slabb

Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Behavior of Concrete-Graphite/Epoxy Sections in Composite Bridge Girders, F. Gordaninejad, M. Saiidi and N. Wehbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709.

Dynamic Stiffness Analysis of Concrete Pavement Slabs, N. McCavitt, M. R. Yates and M. C. Forde, TE July/Aug. 92, p540-556.

Elastic Buckling of Incomplete Composite Plates, Koichi Sato, EM Jan. 92, p1-19.

Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, J. Larralde, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654.

Method Proposed for Construction of Multispan Cablestayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282.

Moisture Migration Through Concrete Floor Slabs, Robert W. Day, CF Feb. 92, p46-51.

Slab Behavior in Composite Beams at Openings. I: Analysis, Soon Ho Cho and Richard G. Red-

92, p2287-2303.
Slab Behavior in Composite Beams at Openings. II: Tests and Verification, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p2304-2322.
Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.

Concrete structures
3D Inelastic Dynamic Analysis of RC Structures, Roy F.
Lobo, Sashi K. Kunnath and Andrei M. Reinhorn,

Lobo, Sashi K. Kunnath and Andrei M. Reinborn, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p905-912.
Computational Framework for 3D Nonlinear Discrete Crack Analysis, V. E. Saouma, R. W. Reich and J. Cervenka, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p788-791.
Design of the Boney Falls RCC Emergency Spillway, W. J. Marold, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-490.

Drying and Cracking Effects in Box-Girder Bridge Seg-ment, Zdeněk P. Bažant, Vladimír Křistek and Jan L. Vítek, ST Jan. 92, p305-321.

Field Monitoring of a Modular Detached Breakwater System, Robert M. Sorensen and J. Richard Weggel (Coastal Engineering Practice '92, Steven A. Hughes ed., 1992), p189-204.

ct., 1772), p107-20-.
Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchors,
O. Chaallal and B. Benmokrane, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p606-617.

Hybrid (FRP-Steel) Reinforcement for Concrete Structures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p655-665.

Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelps, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p519-531.

Integrity Testing of Concrete Elements Using Surface Waves, B. R. Bowen, J. M. Roesset and K. H. Stokoe, II., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p952-955.

Investigation of Concrete at a Middle East Plant, Jerome P. O'Connor, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p505-518.

Learning to Love NDT, Bernard H. Hertlein, CE Jan. 92, p48-50.

Nondestructive Crack Identification by Acoustic Emission Analysis and Ultrasonic Frequency Response, Masayasu Ohtsu and Yasunori Sakata, (Nondestructive Testing of Concrete Elements and Structure, Farhad Ansari, ed. and Stein Sture, ed., 1992), p171-181.

Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992, 0-87262-887-6, 235pp.

Peaches and Concrete, Housh Rahimzadeh and Mark B. Haselton, CE Feb. 92, p42-44.

RecCat 10, John Prendergast, CE Oct. 92, p44-47.

Rehabilitation of Chloride Damaged Concrete, Christopher P. Hodges, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491.

Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p956-959.

Steam Injection System for Lunar Concrete, Dennis M. Pakulski and Kenneth J. Knox, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1347-1358.

Yield Safety, Cracking Control, and Moment Redistribu-tion, M. Z. Cohn and Paolo Riva, ST Feb. 92, p447-468.

### Concrete structures failure

On the Role of Experimental Mechanics in Assessing the Performance of Concrete, Stuart E. Swartz, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p119-122.

Alternative Airfield Pavement Quality Control, Raymond P. Rawe and Terry A. Ruhl, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p109-123.

Bond Strength of Straight GFRP Rebars, S. Tao, M. R. Ehsani and H. Saadatmanesh, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p598-605.

A Cumulative Failure Criterion of Concrete Under Uniaxial Dynamic Compressive Loading, Tianxi Tang and Dan G. Zollinger, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p860-

Determination of In-Situ Stresses From Acoustic Emissions, A. K. Maji, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p405-

Evolution of Damage in Brazilian Test Using Holograph-ic Interferometry, A. Castro-Montero, Z. Jia and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p612-615.

Experimental Determination of the Relation Between the Damaged Zone and the Aggregate Size in Concrete Through Acoustic and Mechanical Techniques, D. Fokwa, Y. Berthaud and D. Breysse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, 41992), 2121-124.

Through Acoustic and mechanican recomiques, Dr. Fokwa, Y. Berthaud and D. Breysse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p131-134.

Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelips, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p519-531.

On the Role of Experimental Mechanics in Assessing the Performance of Concrete, Stuart E. Swartz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p119-122.

The Optimum Gravity Dam, Jerome M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p5-19.

The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p80-91.

Testing and Cobra-SFS Analysis of the VSC-17 Ventilated Concrete, Spent Fuel Storage Cask, Mikal A. McKinnon and Richard C. Schmitt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p164-772. p764-772.

p764-772. Three-Dimensional Fracture Process Zone Detect.on in Concrete, K. D. Basham, Y. C. Jean and K. P. Chong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p401-404.
Use of the Break-Off Method for the Evaluation of High Performance Concrete, Tarun R. Naik and Amr S. Hassaballah, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p92-106.

Cone penetration
Time-Dependent Cone Penetration Resistance Due to
Blasting, Wayne A. Charlie, Mutabihirwa F. J. Rwebyogo and Donald O. Doehring, GT Aug. 92, p1200-1215.

Cone penetration tests

Deep Compaction by Vibro Wing Technique and Dy-namic Compaction, Kaare Senneset and Jarle Nest-vold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p889-901.

Juran, ed., 1992), p889-901.
Design and Performance of Two Port Silos on Improved Ground, M. U. Ergun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p842-854.
Effect of Lateral Stress on CFI Penetration Pore Pressures, J. P. Sully and R. G. Campanella, GT July 91, p1082-1088.
USAF's New Contingency Soils/Pavement Testing Van, Mark S. Buncher and Don J. Christiansen, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p27-40. p27-40.

Conferences
ASCE Sponsors Fifth International Civil Engineering
Round Table, NE Nov. 92, p15.
Bridge Conference Gains in Attendance, Importance (ltr),
Reidar Björnborde, CE Oct. 92, p34.
CE Summiteers Offer Views on Problems Troubling to
Profession, CE Aug. 92, p66-67.
Conference Promotes Polymer Concrete Rehab, CE May
92, p21-22.

GIS Conference Highlights Broadly Focused Systems, CE

July 92, p22.

An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Century: Beyond Engleberg, Richard R. Powell, Edwyn James and Alfred Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p1494-1498.

Postscript on 1992 National Engineers Week in D.C., CE Aug. 92, p67-68.

Potential ISTEA Funds Boost Bridge Conference, CE Aug. 92, p10,12.

Progress on Dam Safety Highlighted at Conference, CE

Progress on Dam Safety Highlighted at Conference, CE Nov. 92, p21.

True Costs of Underground Construction Assessed at No-Dig '92, CE June 92, p12.

Tunnelers Tackle NAFTA Markets, Privatization, CE Dec. 92, p18-19.

Water Conference Takes International Focus, CE Nov. 92, p26-27.

Confidence Interval for Design Floods with Estimated Skew Coefficient, Jahir Uddin Chowdhury and Jery R. Stedinger, HY July 91, p811-831.

Preliminary Investigation of a Lunar 16 Meter Optical Telescope, Walter H. Gerstle, N. N. Y. Prasad, Kirk Cessac and Thomas Kratochvil, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2305-2316.

Confined flow

Energy Loss at Combining Pipe Junction, Marc Serre, A. Jacob Odgaard and Rex A. Elder, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p766-771.

Turbulence, and Energy Loss, at Combining Pipe Junctions, Marc Serre and A. Jacob Odgaard, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p389-392.

Analytical Moment-Curvature Relations for Tied Concrete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544.

Confinement Steel Requirements for Connections in Ductile Frames, M. R. Ehsani and J. K. Wight, ST Mar. 90, p751-767.

Ductility and Detailing Requirements of Bearing Wall Buildings, John W. Wallace and Jack P. Moehle, ST June 92, p1625-1644.

Finite Element Modeling of Concrete Expansion and Confinement, F. J. Vecchio, ST Sept. 92, p2390-2406. Strength and Ductility of Confined Concrete, Murat Saatcioglu and Salim R. Razvi, ST June 92, p1590-

Conflict

Conflict Management Training for Today's Engineering Managers, Vicki S. Kaman and James A. McCam-bridge, ME July 92, p298-305.

Conflicts in Health and Safety Matters: Between a Rock and a Hard Place, Richard C. Schwing, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p135-147.

Opportunities and Constraints for the Innovative Geo-technical Contractor, Peter J. Nicholson and Donald A. Bruce, (Excavation and Support for the Urban Infra-structure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p46-64.

Resolving Construction Disputes by Mediation: Hong Kong Experience, Kwok-Wing Chau, ME Oct. 92, Kong Exp p384-393.

Resolving Contract Disputes Based on Misrepresenta-tions, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

martin Foncetics, CO Sept. 92, ps/2-467.

The Use of Influence Diagrams in Risk Management Involving Multiple Stakeholders, Y. Hong and G. E. Apostolakis, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p331-337.

cu. and Eugene Z. STAKIN, ed., 1992), p531-331.
Use of Interactive Simulation Environments for the Development of Negotiation Tools, Allison M. Keyes and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p68-73.

Using Conflict Management for Better Decision Making, Amarjit Singh and Demetres A. Vlatas, ME Jan. 91, p70-82.

water Management as an Instrument for Cooperation and Reconciliation, Charles G. Gunnerson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p724-779.

Maramouz, etc., 1992.), p.124-129.
What Should the ASCE Model Water Code Committee
Do? Loonard Shabman, (Water Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p237-241.

Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Model-ing Technologies, Walid Y. Thabet, Ayman A. Morad and Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p727-736.

Conflict of in

Conflict of interest
Conflict of Interest in Deep-Draft Anchorage Usage—
Application of QT, Jan A. Berg-Andreassen and Adam
K. Prokopowicz, WW Jan./Feb. 92, p75-86. alogue on Political Contributions and Engineering, William E. Norris, El Jan. 90, p38-41.

Conformal mapping
Analytical Solution of Steady Seepage into Double-Walled Cofferdams, Sunirmal Banerjee and Angel Muleshkov, EM Mar. 92, p525-539.

Connecticut

Connecticut's Wellhead Protection Program, Fred S. Banach, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p92-97.

ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1056-1070.

Apr. 94, p1036-1070. Bracing Requirements of Plane Frames, Shyi-Lin Lee and P. K. Basu, ST June 92, p1527-1546. Compendium of Design Office Problems, Committee on Design of Steel Building Structures of the Committee on Metals, Structural Division, ST Dec. 92, p3444-3463.

Confinement Steel Requirements for Connections in Ductile Frames, M. R. Ehsani and J. K. Wight, ST Mar. 90, p751-767.

Mar. 90, p/31-701.

Creep Effects in Composite Beams with Flexible Shear Connectors, Angelo Marcello Tarantino and Luigino Dezi, ST Aug. 92, p2063-2081.

Design Considerations for Using Adhesives in Shear Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

Ductile Multiple-Anchor Steel-to-Concrete Connections, Ronald A. Cook and Richard E. Klingner, ST June 92, p1645-1665.

Experimental Performance of Long Links in Eccentrically Braced Frames, M. D. Engelhardt and E. P. Popov, ST Nov. 92, p3067-3088.

Nov. 94, p3061-3088. A Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (*Probabilistic Mechanics and Structural and Geotechnical Reliability*, Y. K. Lin, ed., 1992, p320-323. Fatigue Strength of Riveted Bridge Members, John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981.

Modeling Slab Contribution in Frame Connections, B. M. Shahrooz, S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494.

Modified Stub-Girder Floor System: Full-Scale Tests, M. Ahmad, E. Y. L. Chien and M. U. Hosain, ST Nov. 92, p3222-3236.

Prying and Shear in End-Plate Connection Design, Cam-eron P. Chasten, Le-Wu Lu and George C. Driscoll, ST May 92, p1295-1311.

Reliability Analysis of Partially Restrained Steel Connections, Gregory L. Tucker and Richard M. Bennett, ST Apr. 90, p1090-1101.

Reliability Phased Specification for Engineered Wood Construction, James R. Goodman, Allan G. Burk and David G. Pollock, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p73-77.

Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Hsu and Apostolos Fafitis, ST Sept. 92, p2459-2474.

Strength of Lag-Screw Connections, Thomas E. McLain, ST Oct. 92, p2855-2871.

ST 001. 92, p263-22611.
A Systems Reliability Approach to the Safety of Steel Connections, Janice J. Trautner and Richard M. Bennett, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p495-498.

Bolted Connections in Wood under Bending/Tension Loading, R. Davalos-Sotelo and P. J. Pellicane, ST Apr. 92, p999-1013.

Cyclic Behavior of End-Plate Moment Connections, Keb-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2917-2930.

Effective Strength of 'Square-and-Diagnonal' Double-Layer Grid, Toshitsugu Saka and Yoshiya Taniguchi, ST Jan. 92, p52-72.

Reliability of Bolted Wood Connections, John J. Zahn, ST Dec. 92, p3362-3376.

Connections, welded

Analysis of Welded Tubular Connections Using Continu-um Damage Mechanics, William F. Cofer and Jihad S. Jubran, ST Mar. 92, p828-845.

Weldment Design for RHS Truss Connections. I: Applications, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2784-2803.

Weldment Design for RHS Truss Connections. II: Experi-mentation, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2804-2820.

Canada's Green Plan: Unique Approach to Preserving Environment, Thomas J. Selinger, El Oct. 92, p349-

Review of Equations of Conservation in Curvilinear Co-ordinates, Pei-Fang Wang, EM Nov. 92, p2265-2281.

Consistency and Reproducibility of Falling Weight Deflections, Christ van Gurp, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p291-305.

Field Evaluation of Strain Gauges in Asphalt Concrete Pavements, Peter E. Sebaaly and Nader Tabatabaec, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p382-396.

Consolidatio

Adequacy of Surface Water-Supply Systems: Case Study, Krishan P. Singh, Sally M. Broeren and Ali Dur-gunoğlu, WR Nov./Dec. 92, p620-635.

Anisotropic Plasticity Model for Undrained Cyclic Be-havior of Clays. 1: Theory, Robert Y. Liang and Feng-gang Ma, GT Feb. 92, p229-245.

Anisotropic Plasticity Model for Undrained Cyclic Be-havior of Clays. II: Verification, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p246-265.

C<sub>0</sub>/C<sub>c</sub> Concept Applied to Compression of Peat, Patrick J. Fox, Tuncer B. Edil and Li-Tus Lan, GT Aug. 92, p1256-1263.

Cyclic Behavior of a Deepwater Normally Consolidated Clay, Rathindra N. Dutt, Earl H. Doyle and Richard S. Ladd, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p546-559.

Design of the Charter Oak Bridge Embankments, Alec D. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p721-736.

Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, Siew-Ann Tan, Ket-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p209-228.

Effect of Water on the Consolidation of Crushed Rock Salt, M. L. Wang, S. K. Miao, A. K. Maji and C. L. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p531-534.

Equations for Compression Index Approximation, A. W. N. Al-Khafaji and O. B. Andersland, GT Jan. 92,

p148-153.

Flow Capacity Effect on Vertical Drain Performance, R. Robert Goughnour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p993-1005.

Flow-Deformation Response of Dual-Porosity Med Derek Elsworth and Mao Bai, GT Jan. 92, p107-124.

Kinematically Unconstrained Compression of Soft Clay, Richard J. Finno and Yongheun Rhee, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p143-

One-Dimensional Settlement Analysis for Embankments, Peter A. Stauffer, Richard R. Davidson, Richard S. Ladd and David B. Paul, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403.

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Problems Related to Disposal of Fly Ash and its Utiliza-tion as a Structural Fill, Buddhima Indraratna, (Utili-zation of Waste Materials in Civil Engineering Con-struction, Hilary I. Inyang, ed. and Kenneth L. Berge-son, ed., 1992), p274-285.

Simple Procedure for Determining Cap-Plasticity-Model Parameters, Tien-Kuen Huang and Wai-Fah Chen, GT Mar. 90, p492-513.

Mar. 90, p492-513.

SOA: Large Strain Consolidation Predictions, F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243.

Soil Plug Response in Open-Ended Pipe Piles, M. F. Randolph, M. May, E. C. Leong, A. M. Hyden and J. D. Murff, GT May 92, p743-759.

Unified Approach to Ground Improvement by Heavy Tamping, Kwang Wei Lo, Peng Lee Ooi and Seng-Lip Lee, GT Mar. 90, p514-527.

Consolidation, soils

Effects of  $K_0$  and Overconsolidation on Uplift Capacity,

Adel Hanna and Ashraf Ghaly, GT Sept. 92, p1449-

1469.

Micromechanical Simulation of Wave Propagation in Dense Granular Assemblies, J. S. Lee, M. Y. Ma and A. B. Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p417-420.

Stress-Strain-Strength Responses of Compressible Chicago Glacial Clays, Richard J. Finno and Choong-ki Chung, GT Oct. 92, p1607-1625.

The Use of Dynamic Compaction to Consolidate Nuclear Waste, Cliff Schennayder and Robert G. Lukas, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1311-1323.

Constitutive equations
Anisotropic Hardening Plasticity Model for Sands,
Robert Y. Liang and Hann-Ling Shaw, GT June 91, p913-933.

Generalized Creep and Stress Relaxation Model for Clays, Ronaldo I. Borja, GT Nov. 92, p1765-1786.
Nonisothermal Viscoplasticity, Marc Benowitz and Maciej P. Bieniek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p244-

247.

Constitutive models

Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. I: Theory, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p229-245.

Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. II: Verification, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p246-265.

Compression Failure of Quasibrittle Material: Nonlocal Microplane Model, Zdenèk P. Bazant and Joško Ożbolt, EM Mar. 92, p540-556.

Constitutive Model for Concrete in Strain Space, O. A. Pekau, Z. X. Zhang and G. T. Liu, EM Sept. 92, p1907-1927.

p19U7-1927.
Constitutive Model for Ice, H. A. Khoo and T. M. Hrudey, EM Feb. 92, p259-279.
Constitutive Modeling and Simulation of Energy Absorbing Polyurethane Foam Under Impact Loading, James A. Sherwood and Colin C. Frost, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158.

1992), p135-138.
Constitutive Modeling for Material with Perfect Disordered Heterogeneity, X. Lee and C. S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p445-448.
Constitutive Modeling of Slurry Infiltrated Fiber Concrete (SIFCON), David J. Stevens, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, not property of the p ed., 1992), p992-995.

ed., 1992), p992-993.

Elastic-Plastic Analysis of Footings on Anisotropic Soils,

A. Nanda and T. Kuppusamy, GT Mar. 92, p428-448.

An Evaluation Study of Modified Mohr-Coulomb and

Cap Models, Hamdan N. Al-Ghamedy and Sahel N.

Abduljauwad, (Engineering Mechanics, Loren D.

Lutes, ed. and John M. Niedzwecki, ed., 1992), p717
720.

720.
Fabric Related Probabilistic Model for Granular Materials, Jamshid Jahedi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p475-478.
Geomechanics of Subsidence Due to Pumping of Groundwater, Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 2002).

Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, N. Navayogarajah, C. S. Desai and P. D. Kiousis, EM May 92, p990-1011. Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. 1: Theory, Ching S. Chang, Yang Chang and Mohammed G. Kabir, GT Dec. 92, p1959-1974.

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, Ching S. Chang, Mo-hammed G. Kabir and Yang Chang, GT Dec. 92,

icromechanics-Based Constitutive Model for Interface Shear, M. P. Divakar and A. Fafitis, EM July 92, p1317-1337.

Microplane Model for Cyclic Triaxial Behavior of Con-crete, Joško Ožbolt and Zdeněk P. Bažant, EM July 92, p1365-1386.

pl 303-1360.

Modeling Anisotropy of Clays at Critical State, S. Thevanayagam and J.-L. Chameau, EM Apr. 92, p786-806.

Neural Network-based Modeling of Composite Material with Emphasis on Reinforced Concrete, X. Wu and J. Ghaboussi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1179-

1186. Nonlinear Analysis of Strain-Softening Damage under Monotonic and Cyclic Loading, Zdenek P. Bažant, Joško Ožbolt and Rolf Eligehausen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p490-493. Predicting Behavior of Cyclically Loaded RC Structures, William K. Rule and Robert E. Rowlands, ST Feb. 92, 623 514.

William K. Rule and Robert E. Rowianus, 31
p603-616.
Probabilistic Micromechanics in Constitutive Modeling
of Granular Material, Ching S. Chang, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p437-440.
Probabilistic Particle-Related Constitutive Model for
Clayey Material, Mohammad Djavid, (Probabilistic
Mechanics and Structural and Geotechnical Reliability,
Y. K. Lin, ed., 1992), p471-474.
Rate-Dependent Plasticity Representation for Energy
Absorbing Materials, Q. H. Zuo, A. K. Maji, M. K.
Neilsen and H. L. Schreyer, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p151-154.

Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl51-154.
Single-Hardening Model with Application to NC Clay, Poul V. Lade, GT Mar. 90, p394-414.
Softening Models for Concrete: Stability and Uniqueness, Donald R. Curran, James K. Gran, Lynn Seaman and Tarabay H. Antoun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p369-272.

Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200.

EM June 92, pl.184-1200.
Constitutive relations
Compressive Softening Model for Concrete, Eiji Mizuno
and Shigemitsu Hatanaka, EM Aug. 92, pl.546-1563.
Constitutive Equation for Granular Material by Hypoclasticity, R. K. Mysore and W. E. Falby, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p733-736.
Discrete Mechanics of Sediment Transport, Peter K.
Haff, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), p756-759.
Joint M. Niedzwecki, ed., 1992), p756-759.
Lottibuted Failure Analysis, Fallacies and Remedies,
Kaspar Willam, Andreas Dietsche, Guillermo Etse and
Paul Steinmann, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p772775.

775.
[Geometric Damage Tensor Based on Microplane Model, Ignacio Carol, Zdenèk P. Bažant and Pere C. Prat, EM Oct. 91, p2429-2448.
[Granular Flow on a Bumpy Inclined Chute, Marijan Babić, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1024-1027.
[Mechanics of Granular Materials at Very Low Effective Stress Levels, Stein Sture, Nicholas C. Costes and David F. McTigue, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1038.
[On a Micromechanical Basis of Stochastic Constitutive]

On a Micromechanical Basis of Stochastic Constitutive Laws, Martin Ostoja-Starzewski, Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

Revised Cam-Clay Model, B. R. Srinivasa Murthy, A. Vatsala and T. S. Nagaraj, GT June 91, p851-871. Simple Double-Hardening Model for Geomaterials, Sunirmal Baneriee, Robert O. Davis and Kandiah Sribalaskandarjah, GT June 92, p889-901. Wave Propagation in a Randomly Layered Medium, Werner Kohler, George Papanicolaou and Benjamin White, (Probabilistic Machanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p381-383.

Constraints
Communication Protocol in Structural Design Objects,
Jamal A. Abdalla and Sanjai Tiwari, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p269-276.
Conflicts in Health and Safety Matters: Between a Rock
and a Hard Place, Richard C. Schwing, (Risk-Based Decision Making in Water Resources V, Yacov Y.
Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p135-147.
Enercy Efficient Pump Station Operation with a Pump

Energy Efficient Pump Station Operation with a Pump Switching Constraint, Kofi Awumah and Kevin E. Lan-sey, (Water Resources Planning and Management: Sav-ing a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p604-669.

Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Mohammed N. Chang. (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p975-988.

Meven A. Frugnes, ed., 1972, pp. 1972.

The Initial Exploration of Mars: Rationale for a Return Mission to Chryse Planitia and the Viking 1 Lander, Robert A. Craddock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 1488-1499.

Sture, ed. and Russell J. Miller, ed., 1992), p1488-1499.
Launching Facility Constraints on the Space Exploration Initiative, Kadett Chan and Alex J. Montoya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2044-2055.
Maximum and Minimum Storage Trajectories That Meet Specific Risk Levels, Laura Fagherazzi, Jean-Claude Rassam and André Turgeon, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), n284-301.

p284-303.

A Multi-objective Criteria Analysis for Alternative Route Planning, Amy Zlotsky, Michael P. Gutzmer and Guy M. Evasco, (Water Resources Planning and Management Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p474-479.

On-Orbit Chipless Cutting and Tube Welding in Space Station Freedom, William R. Wessels, Mitchell D. Mulder and Brace B. Daniel, (Engineering, Construction, and Operations in Space III, Willy Z. Sach, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p815-826.

Plane Frame Optimum Design Environment Based on Genetic Algorithm, W. M. Jenkins, ST Nov. 92, p3103-3112.

ps103-3112.

Sequential Versus Distributed Constraint-Based Approach to Structural Design Automation: A Comparative Study, Sivand Lakmazaheri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p261-268.

Stability of Systems of Rigid Bodies by Bounding Theorems, Thomas E. Boothby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p904-907.

Constructibility

Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89. Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Overview of Existing Lunar Base Structural Concepts, Task Committee on Lunar Base Structures, AS Apr. 92, p159-174.

Path-Finder: Al-Based Path Planning System, A. A. Morad, A. B. Cleveland, Jr., Y. J. Beliveau, V. D. Fran-sisco and S. S. Dixit, CP Apr. 92, p114-128.

RCC Dam Construction—A Contractor's View, Jeffrey C. Allen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-

Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Achieving Computer-Integrated Construction, Matt Syal, M. Kevin Parfitt and Jack Willenbrock, CC Aug. 92, p10-11.

Advancing Anchorage Technology, Stuart Littlejohn, CE July 92, p61-64.

July 92, pol-04.

Advantages of Installing Influent Fine Screens at a Large
Wastewater Treatment Plant, George G. Balog, Dave
L. Montgomery, Amaryit Sokhey, Manu A. Patel and
Norman R. Prima, (Environmental Engineering: Saving a Threatmend Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p287-290.

A/E or Contractor Liability? Michael C. Loulakis and William L. Cregger, CE Jan. 92, p35.

William L. Uregger, U. Jan. 74, 1935.
An Agenda for AEC PDES Research, Jason P. Heroux,
Douglas J. Peters, William J. Rasdorf and John W.
Baugh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno,
ed. and Jeff R. Wright, ed., 1992), p376-385.

ed. and Jeff R. Wright, ed., 1992), p376-385.

Al Supported Process Planning for Automated Rebar Fabrication, Md. Salim and Leonhard E. Bernold, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p872-879.

The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257.

Analysis of Wharf for a Container Terminal Luis Her-

Analysis of a Wharf for a Container Terminal, Luis Hernández Toca and José A. Arréllaga, (Ports '92, David Torseth, ed., 1992), p228-237.

An Analysis of an Inflatable Module for Planetary Surfaces, Paul S. Nowak, Willy Z. Sadeh and Marvin E. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p78-88.

Analysis of Space Crane Articulated-Truss Joints, K. Chauncey Wu and Thomas R. Sutter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p320-331.

Application of Large Infrastructure Project Financing to Construction Projects in Space, Michel Lyonnet du Moutier and Patrick Cohendet, Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2196-2207.

The Application of Open System Architecture to Plane-tary Surface Systems, D. A. Petri, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 9469-482.

ASCE Should Have a Construction Safety Committee, C. E. Jackson, Jr., El Jan. 92, p56-59.

Back to the Future: A Saturn V-Based Low Earth Orbital Transportation Node, Thomas J. Frieling, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p957-968.

Behavior of Compacted Lunar Simulants Using New Vacuum Triaxial Device, Chandra S. Desai, Hamid Saadatmanesh and Thomas Allen, AS Oct. 92, p425-

Building a Pipeline—Not a "Flow Through" Process, Roddy Rogers, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p591-

CADD Utilization in Residential Construction: From Subdivision Design to Dwelling Unit, M. G. Syal, C. McIntyre and J. H. Willenbrock, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p207-213.

Causes of Quality Deviations in Design and Construc-tion, James L. Burati, Jr., Jodi J. Farrington and Wil-liam B. Ledbetter, CO Mar. 92, p34-49.

The Challenge of Constraining Mass for Planetary Construction, John F. Connolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p350-

Classifying Process Control Information, Victor E. Sanvi-do and John Messner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p340-347.

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92,

CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.

Constructing Radiation Shields with Textiles for Lunar Applications, J. Lewis Dorrity and James W. Brazell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-377.

Miller, ed., 1922, p. 508-517.

Construction and Development of a Human Base on Mars, Owen Gwynne, Yoji Ishikawa, Yukinobu Yamamoto, Hisateru Uyeda and Thomas Bongiovi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p89-99.

Construction Applications of Vision Systems, Gary R. Smith, H. Randolph Thomas and William Gleba, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p476-483.

Jeff R. Wright, ed., 1992), p476-483.
Construction Challenges on Planetary Surfaces, H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p458-468.
Construction Induced Movements of Insitu Walls, G. Wayne Clough and Thomas D. O'Rourke, (Design and Performance of Earth Retaining Structures, Philip Lambe, ed. and Lawrence A. Hansen, ed., 1990), p439-470.

Construction Induced Vibration in Urban Environments, Barry M. New, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p212-239.

Construction Loads on Floors: Results of a Survey, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p499-

Construction of a Far-Term (2020+AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Mon-toya and Ann Campbell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p427-440. Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-

Construction on Wisconsin's Lake Michigan Coast, J. Philip Keillor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p762-778.

Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willen-brock and M. K. Parfitt, CO Dec. 92, p651-666.

Container Terminal Planning: 2001, James E. Davis, (Ports '92, David Torseth, ed., 1992), p15-28. Contest Seeks Quality Specs, CE Oct. 92, p8.

Cranes, Concrete, Construction...and Computers, Paul Tarricone, CE June 92, p44-47.

Tarricone, CE June 92, p44-47.
Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.
Cylindrical Fabric-Confined Soil Structures, Richard A. Harrison, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p123-134.
Deep Water Container Wharf & Crane Foundation, John E. Gant, (Ports '92, David Torseth, ed., 1992), p238-247.

Design and Construction of a Bonded Fiber Concrete Overlay of CRCP (Louisiana, Interstate Route 10, August 1990), William M. King, Jr., William H. Temple and Steven L. Cumbaa, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p353-362.

Design and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p554-570.

Design and Construction of Two Major Experiments at the URL, P. M. Thompson, B. H. Kjartanson and R. S. Read, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1082-1089.

Committee, 1992), p1082-1089.

Design and Construction of Waterfront Facilities at U.S.
Navy Homeport at Ingleside, Texas, Edward H.
Stehmeyer, Jr., David W. Mock and Donald L. Godeau, (Forts '92, David Torseth, ed., 1992), p644-656.

Design, Construction, and Performance of a Baffled Breakwater, Jonathan W. Lott and Walter E. Hurtienne, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p487-502.

Design Criteria for an Underground Lunar Mine, John Assiekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p183-1194.

Design of the Charter Oak Bridge Embankments, Alec D. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p712-736.

Design-Build Goes Public, James Denning, CE July 92, Design-Build Goes Public, James Denning, CE July 92, Posign-Build Goes Public, James Denning, CE July 92, Posign-Build Goes Public, James Denning, CE July 92,

Design-Build Goes Public, James Denning, CE July 92, p76-79.

The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Directions for Lunar Construction: A Derivation of Rerections for Lunar Construction: A Derivation of Re-quirements from a Construction Scenario Analysis, William C. Dias, Subramani T. Venkataraman, Randel A. Lindemann, Jacob R. Matijevic, Jeffrey H. Smith and Richard R. Levin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p357-367.

Dust Control Research for SEI, Kriss J. Kennedy and Jeffrey R. Harris, Engineering, Construction, and Operations in Space 11I, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p398-407.

and Russell J. Miller, ed., 1992), p.398-407.

Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p.780-790.

Engineering Issues for Early Lunar-Based Telescopes, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 92, p.323-336.

Exhibit Will Document War-Era Construction, CE Sept.

92, p22.

Experience-Based Issues in Construction Education, Amarjit Singh, El Oct. 92, p388-402.

Amaŋit Singh, El Oct. 92, p388-402. Expert System for Construction Safety. 1: Fault-Tree Models, Fabian C. Hadipriono, CF Nov. 92, p246-260. Expert System for Construction Safety. 11: Knowledge Base, Fabian C. Hadipriono, CF Nov. 92, p261-274. Facility Management System for Buildings, Edgar Samuel Neely, Jr. and Robert Neathammer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p129-136.

Feedback Mechanisms for Operational Simulation, Amr A. Oloufa and Keith C. Crandall, CP Apr. 92, p161-

Frontloading for Successful Team-Built Projects, Louis J. Martinez, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p504-507.

Gate Maritime Wharf and Intermodal Facility, Viswanath K. Kumar, William L. Allen and Thomas A. Mantia, (Ports '92, David Torseth, ed., 1992), p43-57.

Ground Anchorage Technology—A Forward Look, Stuart Littlejohn, Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p39-62.

Group Prioritization System for Army Military Construc-tion, Bruce C. Goettel, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p49-56.

pays-30.

Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

Historic Seawalls of the Boston Harbor, Massachusetts Region: Evolution, Construction and Repair, David B. Vine and Peter S. Rosen, (Ports '92, David Torseth, ed., 1992), p849-867.

A Horizontal Inflatable Habitat for SEI, Kriss J. Kennedy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p135-146.

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

Improper Uses of Construction Specifications, Bryce Simons, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p316-324.

Indigenous Resource Utilization in Design of Advanced Lunar Facility, Larry S. Bell, Michael G. Fahey, Todd K. Wise and Paul C. Spana, AS Apr. 92, p230-247.

INFO: An Information Framework for Facility Opera-tors, James P. Beckett and Victor E. Sanvido, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p57-64.

Wright, ed., 1992, p57-64.
In-Place Shear Testing of Tile, Arthur P. Reed, Bruce A. Suprenant and Jim Acri, MT Aug. 92, p264-274.
Integrated GIS Solutions with Civil Engineering Projects, Jerry W. Williams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p328-331.

p328-331. Integrating Facility Delivery through Spatial Information, Teresa M. Adams, Alan P. Vonderohe, Jeffrey S. Russell and James L. Clapp, UP Mar. 92, p13-23. Integration of AM/FM/GIS with MODELING/DESIGN on Large Utility PC Network, J. Darrell Bakken and Charline M. Avey, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

Internal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2360-2366.

Investigation of a Concrete Blistering Failure, R. S. Rollings and G. S. Wong, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30.

ed., 1992), p16-30.

Knowledge Elicitation Strategies and Experiments Applied to Construction, Jesus M. De La Garza and C. William Ibbs., (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p69-85.

Knowledge-Based Systems in Structural Engineering in Germany, Nikolaus Fleischmann and Martina Schnellenbach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p53-85.

LA. Metro Rail Red Line Motoring Toward Start-up, CE Feb. 92, p20.

Feb. 92, p20. Laupahoehoe Harbor Planning, Design, & Construction, David A. Lau, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p320-336.

Licensing Code-of-Practice, Leonard T. Skoblar, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1055-1061

Lunar Oasis, Michael B. Duke and John Niehoff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p48-68.

Lunar Resource Base, John Pulley, Todd K. Wise, Claude Roy and Phil Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p483-492.

Lunar Surface Mining Equipment Study, Egons R. Pod-nieks and John A. Siekmeier, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1104-1115.

p1104-1115.
Managing Large Complex Projects, William B. Derrickson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1751-1757.
Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, Kenneth P. Baskin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p691-694.
Manhattan Post Office Engulfs a Whole City Block, CE Jan. 92, p13-14.

Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

CO Dec. 90, p705-726.

Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p58-71.

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

American-Style, Paul Tarricone, CE July 92,

OCEA, A p57-60.

p57-60.

An Optimization Methodology for Crew Assignment Based on Maximizing Labor Productivity, John A. Kuprenas and Anthony D. Songer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p182-189.

Orbital Construction of a NTR Mars Transfer Vehicle, Steve Jolly, Mike Loucks and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p987-998.

Owner Involvement in Construction Projects in Saudi Arabia, Abdulaziz A. Al-Musaid, ME Apr. 92, p176-185.

Performance of Free Draining Base Course at Fort Camp-Performance of Free Draining Base Course at Fort Camp-

Performance of Free Draining Base Course at Fort Campbell, Kentucky, William P. Grogan, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9434-448.

Inomas D. White, ed., 1922), pp.39-446.
Anssed Assembly of a European Space Station, David A. Nixon and Robin C. Huttenbach, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

Pine Creek Tidal Hydraulic Study, James G. MacBroom and Edward Hart, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), Jennings, ed.

anning, Assessing and Implementing Pipeline Rehabili-tation Options, B. Jay Schrock, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741.

Planning for Construction Automation by Integrating In-formation Flow with Soltware and Hardware Control, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p856-863.

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.

92, David Torseth, ed., 1992), p72-84.
Preliminary Analysis of Repository Operational Criteria, John P. Hageman, Asadul H. Chowdhury and Jerome R. Pearring, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1067-1073.
Preliminary Desiration of the Independent Linear Microscopies.

Preliminary Design of an Underground Lunar Mine, Scott B. Berk and Brad R. Blair, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1171-1182.

p117-1182.

Principles of Control for Robotic Excavation, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1401-1412.

Proper and Improper Use of Specifications, Ronald D. Kulchak, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed.,

1992), p311-315

1992), p311-315.
Prototype Lunar Base Construction Using Indigenous Materials, John Amin Happel, Kaspar Willam and Benson Shing, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p112-122.
RCC at 10, John Prendergast, CE Oct. 92, p44-47.
Realistic Specifications for Steel Bridge Painting, Luh-Maan Chang and Machine Hsie, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p299-310.

Representing Building Product Information Using Hy-permedia, Sunil K. Evt, Sari Khayyal and Victor E. Sanvido, CP Jan. 92, p3-18.

Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

Resolving Contract Disputes Based on Misrepresenta-tions, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Revised Hydraulic Design of the Los Angeles County Flood Control System, Michael E. Mulvihill and Scott E. Stonestreet, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612-

Role of the Coastal Engineer in Civil Engineering Practice, ASCE Coastal Engineering Technical Committee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p918-934.

ed., 1992), p918-934.

The Role of the Repository Implementer in Providing and Demonstrating Safe Disposal of Radioactive Wastes, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p102-105.

Securing Strategic National Security Objectives Through Maritime Activities, S. G. Phernambucq and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-321.

Site Characterization and the Method of Multiple Work-ing Hypotheses, David F. Fenster, K. Michael Cline, John A. Blair and Jane Stockey, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2751-2751.

Site Event Advisor: Expert System for Contract Claims, James E. Diekmann and Knut Gjertsen, CP Oct. 92, p472-479.

Spaceborne Construction and Operations Planning: Decision Rules for Selecting EVA, Telerobot, and Combined Work-Systems, Jeffrey H. Smith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1988-1995.

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p599-605.

Stability Evaluation During Staged Construction, Charles C. Ladd, GT Apr. 91, p540-615.

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept. 92, p525-544.

Strategies for Technology Push: Lessons from Construc-tion Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.

Successful High Traffic Chip Seal Construction, Scott Shuler, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),

pl80-203.

Swedith High-Level Radioactive Waste Management Issues, Per-Eric Ahlström. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p33-40.

Technical Issues for Lunar Base Structures, Brent Sherwood and Larry Toups, AS Apr. 92, p175-186.

Tensile Terminal, Horst Berger and Edward M. De Paola, CE Nov. 92, p40-43.

Tests on the Application of CAN-O to Construction Proc.

ce. 103. 72, pau-43.
Tests on the Application of CAN-Q to Construction Process Modeling, Amarit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p199-206.

Thermal Investigation of a Large Lunar Telescope, Sherry T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 842-1852.

Tolerance Limits for Geometric Imperfections in Hyper-bolic Cooling Towers, A. Alexandridis and N. J. Gard-ner, ST Aug. 92, p2082-2100.

Tomorrow's Schools, Socrates Ioannides and Robert P. Beall, CE Jan. 92, p56-58.

Unit Pricing and Unbalanced Bids, Norman A. Nadel, CE June 91, p62-63.

Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389.

Miller, ed., 1972, p. 578-589.
Using Simulation to Evaluate On-Orbit Construction Operations, Todd C. Parfet, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p. 238-2350.
Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, 0-87262-907-4, 338pp.

son, ed., 1992, G-87262-907-4, 358pp.
Utilization of Waste Sulfur in Construction Materials and as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, William C. McBee, Frank E. Ward, William T. Dohner and Harold Weber, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p116-127.
Water Content-Density Criteria for Compacted Soil Liners, David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830.
Water Penetration in Laterally Loaded Brick, Wall Panels.

90, p1811-1830.
Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.
Wave Forecasting for Construction in Mobile Bay, Scott L. Douglass, William W. Schroeder and John T. Robinson. (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p713-727.

Hughes, ed., 1992), p713-727.
Weather Advisor System for Construction Duration Estimation: Potential of Integrating KBS's and CD-ROM Databases, Diego Echeverry and Moonja P. Kim, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p833-840.
West Point Temporary Construction Dock, Chris Sundberg and Jerry Stubbs, (Ports '92, David Torseth, ed., 1992), p723-736.

Construction companies
AGC Presents 20th Annual Build America Awards, CE
June 92, p12,14,16.

Design Engineer/Contractor Bankruptcy: Considerations for Debtor and Creditors, Jeffrey S. Russell and James J. Casey, Jr., ME July 92, p278-297. Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92,

p667-676.

Financial Performance Analysis for Construction Indus-try, Roozbeh Kangari, Foad Farid and Hesham M. El-gharib, CO June 92, p349-361. Five Years Later, How Are You Doing?, CE Dec. 92, p8.

Improving International Competitiveness, Robert C. West, El Apr. 92, p107-112.
Multibillion-Dollar Resort Planned for Japan, CE Mar.

Socioeconomic Accounting in Construction, Amir Ta-vakoli, Robert G. Ashmun and Cynthia S. Collyard, El Apr. 92, p156-165.

Construction control
Formal Development of Line-of-Balance Technique,
Zohair M. Al Sarraj, CO Dec. 90, p689-704.

Zoniani M. Al Sarraj, CO Dec. 90, p689-704.
A Prototype Control System for Construction Monitoring, Dulcy M. Abraham, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p631-638.

Construction costs

Causes of Quality Deviations in Design and Construc-tion, James L. Burati, Jr., Jodi J. Farrington and Wil-liam B. Ledbetter, CO Mar. 92, p34-49.

Economic Factors in Roller Compacted Concrete Dam Construction, John W. Parker, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p227-241.

McLean, ed., 1992), p.227-241. Integrated Approaches for Costing Design Alternatives, Guillermo F. Salazar, Stephanie Foulke and Luigi Di-Monaco, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p848-855. Metric Construction Cost Data Available, NE Sept. 92,

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

A New Fast Track for Public Works, Bill Hirsh, CE Feb. 92, p45-47.

Overview of Design and Construction in the Urban Environment, Thomas R. Kuesel, (Excavation and Support
for the Urban Infrastructure, T. D. O'Rourke, ed. and
A. G. Hobelman, ed., 1992), pl-3.
Selection of Design/Build Proposal Using Fuzzy-Logic
System, James H. Paek, Yong W. Lee and Thomas R.
Napier, CO June 92, p303-317.
Tunneling in the Urban Environment, Norman A. Nadel,
(Excavation and Support for the Urban Infrastructure,
T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),
p172-180.

p172-180.

Construction equipment

Automated Identification of Construction Equipment

Using Acoustical Measurements, H. Randolph Thomas, Gary R. Smith and J. G. Orlowsky, (Computing in

Civil Engineering and Geographic Information Systems

Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p492-499.

Automatic Generation of Simulation Codes in Construc
tion, Ali Touran, (Computing in Civil Engineering and

Geographic Information Systems Symposium, Barry J.

Goodno, ed. and Jeff R. Wright, ed., 1992), p1050
1057.

1057

Goodno, ed. and Jeff R. Wright, ed., 1992), p1050-1057.

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Enhancing Decision Analysis Techniques for Lunar Base Construction Research, Walter W. Boles and David B. Ashley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p341-349.

Modular Robot Testbed, Chris Grasso, Wayne Jermstad, Mike Mathews, Jane Pavlich and Jim Avery, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453.

Outpost Service and Construction Robot (OSCR), Steven Kent, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1454-1463.

Performance-Based Evaluation of Lunar Base Construction Equipment and Methods, Walter W. Boles, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p332-340.

Shell/Toolkit for Multimedia Educational Applications, Boyd C. Paulson, Jr., Mohan Manavazhi, Hossam El-Bibany and Rafay Khan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p348-355.

Winter Operability: Equipment Problems and Their Remedies, Deborah Diemand, CR Sept. 92, p124-137.

Construction ladustry, ADR, TOM, Partnering, and Other Management Fanta-

Construction industry
ADR, TQM, Partnering, and Other Management Fantasies, F. H. "Bud" Griffis, EI Oct. 92, p331-344.
AGC Presents 20th Annual Build America Awards, CE
June 92, p12,14,16.
Bar Codes and Data Integration in Construction, George

Bar Codes and Data Integration in Construction, George Stukhart, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p484-491. CERF Draws Construction Lessons from Japan, CE Mar. 92, p26-27. A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434. Cold Warrior to Construction Manager, CE Apr. 92, p10. Competitive Bids May Hamper R&D (ltr), Thomas Rogers, CE Feb. 92, p31-32. Competitive-Bid System Beats Some (ltr), Peter J. Nicholson, CE Feb. 92, p30. Computer-Controlled Brick Masonry, Leonhard E. Bernold, Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-160.

Construction Automation Work Classification, Yvan J. Construction Automation Work Classification, Yvan Beliveau, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 9500-955.

Cranes, Concrete, Construction...and Computers, Paul Tarricone, CE June 92, p44-47.

December Helps, But Contracts Still Down, CE Apr. 92,

December FIGERS, But Canada Properties of the Construction Industry, Antonio Nanni, Hikaru Takeuchi and Kazuhisa Yahagi, El July 92, p284-293.

Effects of Scheduled Overtime on Labor Productivity, H. Randolph Thomas, CO Mar. 92, p60-76.

Evaluation of Advanced Construction Technology with AHP Method, Miroslaw J. Skibniewski and Li-Chung Chao, CO Sept. 92, p577-593. Evaluation of New Building Technology, James D. Lutz, Lub-Maan Chang and Thomas R. Napier, CO June 90,

p281-299.
Flavors and Mixins of Expert Systems Technology Transfer Model for AFC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.
Framework of a Knowledge-Based Estimate Classification System, Irtishad U. Ahmad and Syed T. Rahman, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992., p967-94.
Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Happy Days Are Here Again? Says Report, CE Oct. 92, p8.

Howdy, Partner, Paul Tarricone, CE Mar. 92, p72-74. Implementation of TQM in Building Design and Con-struction, Gerald W. Chase and Mark O. Federle, ME

struction, Gerald W. Chase and Mark O. Federle, ME Oct. 92, p329-339.

Japan's R&D Success Story: Report Tells How They Do It, NE Jan. 92, p3.

Knowledge Based-Object Oriented Primitive Work Item Generation, Joon Won Lee, Francois Grobler and M. Kevin Parfitt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p959-966.

Metrication of Construction—A Message to the American Society of Civil Engineers, Thomas R. Rutherford, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p577-583.

Multiparameter Bidding System—Innovation in Contract

1772, p217-203. Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150. Northeast Conference Has National Implications. CE

July 92, p12,14. Outlook for Design Services Flat over Short Term, NE

Mar. 92, p2.

Mar. 72, p2.
Quality Management Organizations and Techniques,
James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.

Resolving Construction Disputes by Mediation: Hong Kong Experience, Kwok-Wing Chau, ME Oct. 92, p384-393. Shimizu Honors CE Students for Essays on Environment, NE Sept. 92, p1.

NE Sept. 92, pl.
Skull Object Space: Essential Knowledge Typologies for Proprietary Brand Name or Equal Specifications Interpretation, Jesus M. De La Garza and Gaye A. Oralkan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pol-4-62.
Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

CU June 92, p322-346. Technical Personnel Shortages in Construction Industry, Russel C. Jones, El Jan. 90, p16-26. Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

Tort Liability: Limiting U.S. Innovation, Harvey M. Bernstein, CE Nov. 92, p6.

Trend in Local Area Network Utilization, Lu Chang and Li-Chung Chao, ME Jan. 92, p27-39.

Chang and Li-Chung Chao, ME Jan. 92, p27-39.

Underwriting Process for Construction Contract Bonds, Jeffrey S. Russell, ME Jan. 92, p63-80.

United States Metrication and the EC 92, A. I. Johnson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p571-576.

Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

Vertical Business Integration Strategies for Construction, Robert C. Krippaehne, Bob G. McCullouch and Jorge A. Vanegas, ME Apr. 92, p153-166.

Construction Inspection
Monitored Construction Protects Contractor, CE Feb. 92,

Construction management
Advanced Construction Management for Lunar Base
Construction—Surface Operation Planner, Robert P.
Kehoe, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1546-1556.
Automated Construction Field-Data Management System, Bob G. McCullouch, TE July/Aug. 92, p517-526.
CM Launches 'Pre-Emptive Strike' in Bid Documents,
CE June 92, p18,20.
Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92,
p635-650.
A Construction All-Nighter, CE Mar. 92, p8.
Construction Approach to Denver International Airport,
Guy M. (Pat) Stricklin, (International Air Transportation: A New International Airport, Robert E. Boyer, ed.,
1992), p184-191.
Construction under Fire, Ralph D. Ellis, Jr., CE Nov. 91,

and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p737-745.

Knowledge-Based Advisory System for Public-Sector Design-Build, Anthony D. Songer, C. William Ibbs, James H. Garrett, Thomas R. Napier and Annette L. Stumpf, CP Oct. 92, p456-471.

A Knowledge-based System for Duration Estimating and Crew Selection for Construction Activities, Ayman A. Morad and Gerardo D. Diaz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p190-198.

Lessons Learned—Milwaukee Water Pollution Abatement Program, Gary D. Beech, ME Apr. 92, p186-191.

Life in the Fast Track, Richard L. Ridings and Stephen B. Quinn, CE Apr. 92, p46-49.

Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Modeling Input Data for Construction Simulation, Simaan M. AbouRizk and Daniel W. Halpin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1147-1154.

A New Fast Track for Public Works, Bill Hirsh, CE Feb. 92, p45-47.

NIAM Conceptual Data-Base Design in Construction Management, William J. Rasdorf and Osama Y. Abudayeh, CP Jan. 92, p41-62.

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

Potecting Engineer Against Construction Delay Claims: NOCC, David M. Leishman, ME July 91, p314-333.

p385-398.

Protecting Engineer Against Construction Delay Claims: NDC, David M, Leishman, ME July 91, p314-333.

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p366-371.

Schedule "Games" People Play, and Some Suggested "Remedies", James G. Zack, Jr., ME Apr. 92, p138-152.

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

Socioeconomic Accounting in Construction, Amir Tavakoli, Robert G. Ashmun and Cynthia S. Collyard, El Apr. 92, p156-165.

Space-Time Characterization for Resource Management on Construction Sites, Iris D. Tommelein, Juan G. Cas-tillo and Pierrette P. Zouein, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p623-630.

Staffing Up for a Major Program, Edward H. McCormick, David L. Pratt, Kurt B. Haunschild and Jean S. Hegdal, CE Jan. 92, p60-62.

SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

astewater under Home Plate, Walter A. Bishop, Jr. and John S. Fraser, CE Oct. 92, p61-63.

Construction materials

Aerogel—A Transparent, Porous Superinsulator, Arlon J. Hunt, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p398-403.

An Airfield Pavement Forensic Analysis: Cairo East Air Base, Randolph Charles Ahlrich and Gary Lee Anderton, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p39-52.

Building Lunar Roads—An Overview, Bennett Rutledge (Engineering, Construction, and Operations in Spac III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell Miller, ed., 1992), p408-415.

Building Materials Have Nine Lives, CE July 92, p11. The Challenge of Constraining Mass for Planetary Construction, John F. Connolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p350-

Composites Performance in the Infrastructure, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p532-545. Concrete Construction on the Moon, T. D. Lin and Nan Su, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1359-1369.

Corrosion Resistance of Stainless Steels and High Ni-Cr Alloys to Acid Fluoride Wastes, H. D. Smith, K. H. Pool, D. B. Mackey and E. B. Schwenk, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 620-632. p620-627.

po20-021.
The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, Marek-Jerzy Pindera and Alan D. Freed, (Engineering, Construction, and Operations in Space 111, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272.

and Russeil J. Miller, ed., 1992, p.1202-1272. Environmental Monitoring Plan for a Pilot Study Using Phosphogypsum as a Roadbed Material, Reid Lea, Adam Faschan and Marty Tittlebaum, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p.128-139.

Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-200.

Fly-Ash Slurry Island: I. Theoretical and Experimental Investigations, Sumio Horiuchi, Masataka Taketsuka, Takuro Odawara and Hiromi Kawasaki, MT May 92,

pl11/133.

Fly-Ash Slurry Island: II. Construction in Hakucho Ohashi Project, H. Kawasaki, S. Horiuchi, M. Akatsuka and S. Sano, MT May 92, pl34-152.

Guidelines for Design of Cable-Stayed Bridges, ASCE Committee on Cable-Stayed Bridges, (Man-Chung Tang, chmn.), 1992, 0-87262-900-7, 70pp.

Implementation of Material Requirements in Specifica-tions, Harvey C. Beckham and John R. Smith, (Materi-als: Performance and Prevention of Deficiencies and Patitures, Thomas D. White, ed., 1992), p428-433. Indigenous Planetary Construction Material Through Soil Modification, Leonhard E. Bernold, Yasuyuki Horie and Mark B. Boslough, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p493-503. Indigenous Resource Utilization in Design of Advanced

Sture, ed. and Russell J. Miller, ed., 1992), p493-503.
Indigenous Resource Utilization in Design of Advanced Lunar Facility, Larry S. Bell, Michael G. Fahey, Todd K. Wise and Paul C. Spana, AS Apr. 92, p230-247.
An Information System architecture for Construction Materials, Sami Dib and Francois Grobler, (Computing in Civil Engineering, and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p332-339.
In-aitu Release of Solar Wind Gases from Lunar Soil, Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p537-546.
Isotopic Separation of 3He/4He From Solar Wind Gases Evolved from the Lunar Resolith, William R. Wilkes and Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.
Mars Via the Moon—A Robust Lunar Resources-Based

Mars Via the Moon—A Robust Lunar Resources-Based Architecture, Ed Repic and Wally McClure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1603-1630.

1992), p1603-1630.

Materials Key to Rehab, Conference Speakers Say, CE Oct. 92, p11-12.

Mechanical Properties of Compacted Lunar Simulant Using New Vacuum Triaxial Equipment, Chandra S. Desai, Hamid Saadatmanesh and Tom Allen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1240-1249.

Metrication and Building Products: Soft or Hard Conversion, NE June 92, p13.

Mobile Pilot Plant to Reuse Fly Ash in Concents CE Conference of Concents CE Conference on the Concents of C

Mobile Pilot Plant to Reuse Fly Ash in Concrete, CE Oct. 92, p18-19. Modern Prisons Can Reduce Costs and Stress, CE Aug.

92, p14. A More Rational Approach to Pavements, Milton E. Harr, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p172-185.

'One-Stop Shopping' at World of Concrete, CE Apr. 92, p12-13.

p12-13.

Procedures for Evaluating Aggregate Gradation Specifications, Edwin C. Novak, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p261-274.

Prototype Lunar Base Construction Using Indigenous Materials, John Amin Happel, Kaspar Willam and Benson Shing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p112-122.

Realistic Specifications for Manufactured Sand, Charles R. Marek, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p245-260.

1992), p245-260

1992), p243-200.
Recycled Materials for Port Construction, David S. Miller, (Ports '92, David Torseth, ed., 1992), p815-825.
Regolith Dynamics, Mohammed M. Ettouney and Haym Benaroya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1379-1388.

Rocket Fuel to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

p2271-2281.

p2271-2281.
The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p80-91.
Simple and Efficient Methods to Produce Construction Materials for Lunar and Mars Bases, Yoji Ishikawa, Tetsuo Sasaki and Tetsumi Higasayama, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1902), ed. 1335-1346. 1992), p1335-1346.

Sintering of Lunar Glass and Basalt, Carlton C. Allen, Joy A. Hines, David S. McKay and Richard V. Morris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-1218.

Strength and Fracture of Glass in the Lunar Environment, Daniel D. Allen, W. Howard Poisl and Brian D. Fabes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1232-1239.

Structural Materials from Lunar Simulants Through Thermal Liquefaction, Chandra S. Desai and Kirsten Girdner, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p528-536.

Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and H. Hawkins, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564.

Use of Rubber Tires in Highway Construction, Imitaz Ahmed and C. W. Lovell, (Utilization of Waste Materials in Civil Engineering Construction, Hillary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p166-181.

Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Construction methods

Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-

129.
Analysis of Stability of L'Ambiance Plaza Lift-Slab Towers, Piotr D. Moncarz, Roy Hooley, John D. Osteraas and Brant J. Lahnert, CF Nov. 92, p.232-245.
Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CD Dec. 92, p.731-748.
Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p.363-384.
Buckling of Suspended Cambered Girders, Walter L. Peart, Edward J. Rhomberg and Ray W. James, ST Feb. 92, p.505-528.
Building Lunar Roads—An Overview, Bennett Rutledge,

Feb. 92, p303-528.
Building Lunar Roads—An Overview, Bennett Rutledge, (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p408-415.
Building Underpinning Key to Penn Station Rehab, CE Oct. 92, p12-13.

Oct. 92, p12-13.
Case Study of an Offshore Horizontal Boring, John T.
Robinson, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p697-712.
Concept Evaluation Methodology for Extraterrestrial Habitats, Richard M. Drake and Philip J. Richter, AS July

92, p282-296.

 p.2.82-299.
 Construction and Performance of Two Large Rockfill Embankments, Gordon M. Matheson and William F. Parent, GT Dec. 39, pl699-1716.
 Construction of Urugus-I RCC Dam, Juan Buchas and Fotio Buchas, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p258-271.

Critical Success Factors for Construction Projects, Victor Sanvido, François Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.

The Design and Construction of Shuikou Project RCC Diversion Wall, Ma Zhong Hang, Cai Heming and E. B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p117-131.

seign and Proposed Construction Techniques for Pangue Dam, Brian A. Forbes, Dario Croquevielle B. and Hernan Zabaleta G., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean,

ed., 1992), p47-62.

Design of Pena Colorada Tailings Retention Dam, Don-ald L. Sexton, James W. Carpenter and Ernest K. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374-

Engineering a Monument, Evoking a Nightmare, Leo Argiris, Khosrow Namdar and Trevor Adams, CE Feb. 92, p48-51.

y2, p48-51.
 Enhancing Decision Analysis Techniques for Lunar Base Construction Research, Walter W. Boles and David B. Ashley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p341-349.

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90,

An Example of Rubble Mound Construction Procedures, A. W. Sam Smith and L. Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p138-150.

150.
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160

Give Partnering a Chance (ltr), Ronald B. Sieger, David Roberts and Lynn White, CE Sept. 92, p36.

Roberts and Lynn White, CE Sept. 92, p36.
The Granddaddy of All Megaprojects, CE Nov. 92, p10.
Graphical Object-Oriented Simulation System for Construction Process Modeling, L. Y. Liu and P. G. Ioanou, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1139-1146.
Homogeneous Structures Subjected to Repeated Structural System Changes, Luigino Dezi, Giovanni Menditto and Angelo Marcello Tarantino, EM Aug. 90, p1723-1732

1732.

Investigation of L'Ambiance Plaza Building Collapse, Daniel A. Cuoco, David B. Peraza and Thomas Z. Scarangello, CF Nov. 92, p211-231.

Jet Grouting, State-of-the-Practice, J. L. Kauschinger, E. B. Perry and R. Hankour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p169-181.

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

L'Ambiance Plaza: What Have We Learned, Virginia Fairweather, CE Feb. 92, p38-41.

Lessons Learned from Elk Creek Dam, Dennis R. Hopman, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p162-180.

Mechanical Equipment Requirements for Inflatable

sen, ed. and Francis G. McLean, ed., 1992), p162-180. Mechanical Equipment Requirements for Inflatable Lunar Structures, James M. Hines, Craig E. Miller and Richard M. Drake, AS Apr. 92, p248-256. Method Proposed for Construction of Multispan Cable-Stayed Bridges, W. H. Dilger, G. S. Tadros and P. Giannelia, CO June 92, p273-282. Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700. Music School Trumpets the Sounds of Silence, CE Mar. 92, p20, 22.

Overtopping Protection Using Roller-Compacted Con-crete, Harry E. Jackson, (Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 216-1221.

1992), p1216-1221.

Performance-Based Evaluation of Lunar Base Construction Equipment and Methods, Walter W. Boles, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p332-340.

Quarry Techniques for Dimensional Breakwater Stone, Stephen N. Stehlik, R. D. Knisely and C. L. Kramer, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p170-184.

RCC Dam Design Concepts Versus Construction Conditions for Stagecoach Dam, Terrence E. Arnold and Daniel L. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p291-307.

RCC for Rehabilitation of Dams in the USA-An Over-

RCC for Rehabilitation of Dams in the USA-An Overview, Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p.22-46.

ed., 1974), P.Z.-40.

Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, p99-116.

Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, 0-87262-862-0, 520pp.

Shell/Toolkit for Multimedia Educational Applications, Boyd C. Paulson, Jr., Mohan Manavazhi, Hossam El-Bibany and Rafay Khan, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992),

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Trenchless Excavation Construction Methods: Classifica-tion and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536.

Trends and Debatable Aspects in Embankment Dam En-gineering (Paper introduced by Edward B. Perry), J. L. Sherard, (Embankment Dams—James L. Sherard Con-tributions, Sukhanander Singh, ed., 1992), p403-410.

Tripod Crane Concept for Lunar Surface Construction, Haruyuki Namba and Martin M. Mikulus, Ir., (Empineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295.

A Two-Stage Safety Assessment Methodology for Con-struction Activities, M. H. M. Hassan and B. M. Ayyub, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p515-518.

U.S. Army Corps of Engineers and Afghanistan's High-ways 1960-1967, Frank N. Schubert, CO Sept. 91, p445-459.

Use of the Break-Off Method for the Evaluation of High Performance Concrete, Tarun R. Naik and Amr S. Has-saballah, (Materials: Performance and Prevention of De-ficiencies and Failures, Thomas D. White, ed., 1992), p92-106.

Warehouse Tilts Toward Speedy Completion, CE Mar. 92, p16-17.

Construction planning

Advanced Construction Management for Lunar Base Construction—Surface Operation Planner, Robert P. Kehoe, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1546-1556.

Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89.

Construction in 3-D, CE Feb. 92, p12.

Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-

Design and Construction Considerations for Lunar Outpost, H. Benaroya and M. Ettouney, AS July 92, p261-273.

Improving Stone Placement Specifications, David D. Sanders, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p58-63.

Knowledge-Based Simulation of Construction Plans, Abdalla M. Odeh, Iris D. Tommelein and Robert I. Carr, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1042-1049.

Jern R. Wright, ed., 1992, p1042-1049.

A Knowledge-based System for Duration Estimating and Crew Selection for Construction Activities, Ayman A. Morad and Gerardo D. Diaz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p190-198.

Linking Design Data with Knowledge-Based Construc-tion Systems, H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753.

Owner Involvement in Construction Projects in Saudi Arabia, Abdulaziz A. Bubshait and Abdulaziz A. Al-Musaid, ME Apr. 92, p176-185.

Path-Finder: Al-Based Path Planning System, A. A. Morad, A. B. Cleveland, Jr., Y. J. Beliveau, V. D. Fran-sisco and S. S. Dixit, CP Apr. 92, p114-128.

Sisco and S. S. Dall, C. P. Ap. 114-128.

Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352.

Schedule "Games" People Play, and Some Suggested "Remedies", James G. Zack, Jr., ME Apr. 92, p138-157.

Sydney Airport International Terminal Development, Barry R. Munce, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p258-271.

pt38-211.

Ork Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, Walid Y. Thabet, Ayman A. Morad and Yvan J. Beliveau. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p727-736.

Construction site accidents

Employer Liability for Job-Site Injuries, Michael C.
Loulakis and William L. Cregger, CE Apr. 92, p37.

Expert System for Construction Safety. I: Fault-Tree
Models, Fabian C. Hadipriono, CF Nov. 92, p246-260.

Expert System for Construction Safety. II: Knowledge
Base, Fabian C. Hadipriono, CF Nov. 92, p261-274.

Role of Designers in Construction Worker Safety, Jimmie
Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Construction sites
Constructing Site Layouts using Blackboard Reasoning with Layered Knowledge, Iris D. Tommelein, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p214-258.
Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

779.
Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.
Space-Time Characterization for Resource Management on Construction Sites, Iris D. Tomnelein, Juan G. Castillo and Pierrette P. Zouein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p623-630.

1992), p623-630.

Consultants
Defensive Engineering Can Be Dangerous, Nicholas Albergo, CE Oct. 92, p6.
The Evolution of an Environmental Monitor, Peter J. Dodds and R. Scott Sternberger, CE June 92, p56-58.
Project Management Oversight—Good Tool for Program Managers, Michael G. Goode, ME July 92, p243-253.

Records Management in Engineering Firms, Dennis O. Hamilton, ME Oct. 91, p346-356.

Staffing Up for a Major Program, Edward H. McCormick, David L. Pratt, Kurt B. Haunschild and Jean S. Hegdal, CE Jan. 92, p60-62.

Hegdal, CE Jan. 92, p60-62.

Consulting engineers

Better Use of Computer Resources, Ray Arthur Pixley, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1015-1021.

Capturing Capital, Paul J. Zofnass, CE May 92, p67-69.

Coastal Engineering—The Pastl, The Presentl, The Future? Omar J. Lillevang, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p1-11.

Still Working Without a Net, CE Mar. 92, p8.

Consulting services
Better Use of Computer Resources, Ray Arthur Pixley,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992, p1015-1021.
Pricing of Services, Charles S. Hodge, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992, p1089-1094.
Recession Brings Maturity to Environmental Market, CE
Dec. 20, 27

Dec. 92, p27

Contact pressure
Contact Induced Damage, Leon M. Keer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p502-505.
Frictionless Contact with BEM Using Quadratic Programming, Srdan Simunović and Sunil Saigal, EM Sept. 92, p1876-1891.

Container shipping
Analysis of a Wharf for a Container Terminal, Luis Hernández Toca and José A. Arréllaga, (Ports '92, David Torseth, ed., 1992), p228-237.
Barbers Point Harbor: A Unique Solution for Port Upgrade, Michael J. Briggs and Eivind Bratteland, (Ports '92, David Torseth, ed., 1992), p777-790.

A Comprehensive Approach to Container Terminal Plan-ning: Striking a Balance, William D. Friedman, (Ports '92, David Torseth, ed., 1992), p29-42.

Container Terminal Gates Flexible Design for a Dynamic Environment, Larry Nye, (Ports '92, David Torseth, ed., 1992), p912-925.

Container Terminal Planning: 2001, James E. Davis, (Ports '92, David Torseth, ed., 1992), p15-28.

On-Off Terminal Ship-to-Rail Transfer, Asaf Ashar, (Ports '92, David Torseth, ed., 1992), p108-120.

Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.

Signing Systems: Directional, Identity, and Graphic Systems for the Port of Long Beach, Mackey W. Deasy, Wayne Hunt and Louis Rubenstein, (Ports '92, David Torseth, ed., 1992), p85-93.

Underground Refrigeration Outlets, Clay Waseen, (Ports '92, David Torseth, ed., 1992), p682-694.

Upgrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alex-ander Surko, Jr., (*Ports '92*, David Torseth, ed., 1992),

Alternative Cask Maintenance Facility Concepts, an Update and Reassessment, C. R. Attaway, L. G. Medley, R. B. Pope, L. B. Shappert and A. C. Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1336-1342.

1992), p130-1342.
An Analysis of Contingencies for Making Casks Available for Use During the Early Years of Federal Waste Management System Operations, P. E. Johnson, D. S. Joy, R. B. Pope, L. B. Shappert, M. W. Wankerl, R. E. Best, F. L. Danese and S. Schmid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1310-1316.

Management Program Committee, 1992), p1310-1310

ASME Pressure Vessel Code Application to Nuclear Waste Container Design, Mohamed B. Trabia and Mark Kiley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1244-1252.

Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. L. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

Cargo Transport to the Lunar Surface Using a Three Rotor Sling, Brian Tillotson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1010-1021.

A Comparison of a New Generation of Spent Fuel Cask Designs with Current Cask Design Characteristics, William H. Lake, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p1839-1843.

A Comparison of Radionuclide Inventories Between the Direct-Disposal and the Acinide-Burning Cycles, Jorshan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), pl381-1386.

gram Committee, 1992), p.138-1-1380.

Conceptual Design of a Monitored Retrievable Storage
Cask Employing Yucca Mountain Containers, C.
Erwin, D. R. Jackson, J. R. Oliver, M. S. Aljohani and
D. B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2235-2240.

The Control of Large Amplitude Liquid Sloshing with Moving Baffles, T. C. Su and Y. X. Wang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p208-211.

Convective Heat Transfer in Spent Fuel Canisters, M. Keyhani and F. A. Kulacki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p773-778.

Corrosion Lifetime Assessment for Candidate Materials of Geological Disposal Overpack for High-Level Nuclear Waste Canisters—Perspective of R&D in Japan, Hidekazu Asano, Hisao Wakamatsu and Masatsune Akashi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1658-1669.

Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, E. Smailos and R. Köster, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1676-1680.

Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Ports '92, David Torseth, ed., 1992), p737-748.

Critical Stresses in Pintle, Weldment and Top Head of Nuclear Waste Container, Samaan G. Ladkany and Brett R. Kniss, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p1253-1260.

Criticality Safety and Shielding Design Issues in the Development of a High-Capacity Cask for Truck Transport, Jack K. Boshoven, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2156-2160.

Criticality Safety and Shielding Design Issues Related to Transport Cask Design, Alan H. Wells, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Deep Water Container Wharf & Crane Foundation, John E. Gant, (Ports '92, David Torseth, ed., 1992), p238-

Design and Licensing of the VSC Dry Fuel Storage Sys-tem, Art J. McSherry, John V. Massey and Boris A. Chechelnitsky, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p1216-1220.

Program Committee, 1992, p.216-1200
Design Management and Stress Analysis of a Circular Rock Tunnel and Emplacement Holes for Storage of Spent Nuclear Fuel, Nadia Kandalaft-Ladkany and Richard V. Wyman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2260-2266.

Detection of Cracks in Reinforced Concrete Cans, Christian Grosse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p413-416.

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.

Development of a Demonstration Program for a Dry Cask-to-Cask Transfer System with Dual Purpose Casks, Rita W. Bower and Robert E. Jones, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p.2212-2218.

Development Status of the GA-4 and GA-9 Casks, Robert M. Grenier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-

gram Committee, 1992), p1832-1838

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels, J. S. Grant, P. M. Boocock and C. J. Ealing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2227-2234.

Dynamic Response of Flexibly Supported Liquid-Storage Tanks, Anestis S. Veletsos, Yu Tang and H. T. Tang, ST Jan. 92, p264-283.

ST Jan. 92, p.co+263.

Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, M. Pechs and K. Einfeld, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1181-1187.

Engineered Barrier System Failure Modeling: A Statisti-cal Approach, Daniel B. Bullen, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992).

Evaluations of Glass Vitrification Techniques on Iron Ratio Determinations, R. B. Spencer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2399-2405.

Experience with NRC Licensing of a Dual Purpose Cask, Ivan Stuart, Todd Lesser and Marvin Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1231-1235.

Extended-Life Nuclear Waste Package Utilizing Redundant Corrosion/Containment Barriers, F. E. Goodwin and R. E. Westerman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1681-1686.

Floating or Fixed Dock for RO/RO Ship Operation Bankim Mallick and Curtis L. Ratcliffe, (Ports 3 David Torseth, ed., 1942), p709-722.

The German Cask-Concept for Intermediate and Final Storage of Spent Fuel, K. Janberg, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p385-394.

Graphics-Based Site Information Management at Han-ford TRU Burial Grounds, Samuel R. Rod, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p450-457.

High-Level Waste Package Retrievability, Thomas W. Doering and David Stahl, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p362-365.

Impacts of Transportation Regulations on Spent Fuel and High Level Waste Cask Design, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p201-203.

Interfacing the Existing Cask Fleet with the MRS or Fit-ting Round Pegs Into Square Holes, J. W. Doman and R. E. Hahn, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p1889-1895.

Intermediate Level Waste Transport Shielding Study, M.
H. Dean, L. S. Grindrod, S. M. Jones and R. W. T.
Sievwright, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2062-2068.

Issues Influencing Colocation and Integration of Cask Maintenance and MRS Facilities, John A. Richardson, David E. Borchardt and Christopher Charles, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 19001–1902, 1988 1992), p1883-1888.

1992), p1083-1088.
Issues Related to the Transport of a Transportable Storage Cask After Storage, P. McConnell, T. L. Sanders, L. Brimhall, J. M. Creer, E. R. Gilbert and R. H. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180.

Labeling of the Spent Fuel Waste Package, W. G. Cul-breth and A. K. Chagari, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p395-400.

Management Program Committee, 1992), p.393-400.
 Mars Containers: Dust on Teflon Sealing Surfaces, H. V.
 Lauer, Jr. and J. H. Allton, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.508-517.
 Mechanical Response of Cellular Materials Used in Waste Shipping Containers, A. K. Maji, S. Donald and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.308-311.

A Method for Relating Impacts with Yielding and Unyielding Targets, D. J. Ammerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2255-2259.

Modeling of Localized Electrochemistry Within Occluded Regions, Maureen J. Psaila-Dombrowski, Alan Turn-bull and Ronald Ballinger, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1687-1694.

Models for Calculating Radionuclide Release from the Near Field, L. Romero, L. Nilson, L. Moreno and I. Neretnieks, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1922, p954-993.

gram Committee, 1992, p534-539.
Modern Crane Control Enhancements, Jeffrey T. Hubbell, Bruce Koch and Dennis McCormick, (Ports '92, David Torseth, ed., 1992), p757-767.
MRS Using a FUELSTORMT Vault, M. K. Valentine and H. Günther, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1875-1882.

Multi-Barrier, Copper-Base Containers for HLW Dispos-al, Dale T. Peters, Konrad J. A. Kundig, David F. Med-ley and Paul A. Enders, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), 366-376.

Near-Field Radiation Doses from Transported Spent Nu-clear Fuel, R. F. Weiner and K. S. Neuhauser, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), pl 2003-1208.

Preliminary Assessment of the Benfits of Derating a Cask for Increasing Age/Burnup Capability, B. L. Broadhead, C. V. Parks, D. S. Joy and J. S. Tang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 23182-2182. p2182-2189.

Probabilistic Assessment of Spent-Fuel Cladding Breach, H. Foadian, Y. R. Rashid and K. D. Seager, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1018-1025.

Projected Compositions and Radiogenic Properties of DWPF Glasses, J. R. Fowler and M. J. Plodinec, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p904-910.

Quality Assurance in a Cask Fleet Parts Control System, Charles Fernandez, P. N. McCreery and L. B. Shappert, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1343-1348.

Radiation Measurements for Verifying the Loading of Burnup Credit Casks, Ronald I. Ewing, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2161-2164

Reactivity End-Effects Estimates Using A K<sub>20</sub> Perturba-tion Model, Charles R. Martotta, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992). Waste Man p2165-2173.

Residual Stress Mitigation Considerations for Waste Package Design and Closure, E. S. Robitz, Jr. and T. W. Doering, High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p377-384.

Risk Assessment of Shipping Radioactive Waste Using the Standard Waste Box, O. S. Wang, R. F. Carlstrom, G. A. Coles and M. V. Shultz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p416-420.

Routine Methods for Post-Transportation Accident Recovery of Spent Fuel Casks, L. B. Shappert, R. B. Pope, R. E. Best and R. H. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1855-1859.

Shielding Design of the Ventilated Storage Cask, John H. Kessler, John V. Massey and Henry H. Tran, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2047-2055.

Shipping Cask Development Loaded 4 PWR Fuel Assem-blies, H. Y. Kang, J. C. Lee and S. G. Ro, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

Source-Term Calculations for a Total Systems Analysis, David W. Engel, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), pl 758-1764.

Flogrant Committee, 1992, p1798-1708.
A Spacer Grid Hysteretic Model for the Structural Analysis of Spent Fuel Assemblies Under Impact: SAND91-5228C, TTC-1114, Peter R. Barrett, I. Kurkchubasche and Kevin D. Seager, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2249-2254.

STACE: An Integrated Code for Evaluating Spent-Fuel Transport Cask Containment, Kevin D. Seager, Philip C. Reardon and Peter R. Barrett, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1765-1769.

Structural Credit for Depleted Uranium Used in Trasnport Casks, R. Salzbrenner, G. W. Wellman, K. B. Sorenson and P. McConnell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2241-2248

p224-2240.
System Selection of Concepts for Direct Disposal of Spent Fuel, K. Einfeld, K. D. Closs and U. Knapp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1860-1866.

Temperature Scenarios for a Repository at Yucca Mountain, Benjamin Ross, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p784-789.

Testing and Cobra-SFS Analysis of the VSC-17 Ventilated Concrete, Spent Fuel Storage Cask, Mikal A. McKinnon and Richard C. Schmitt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p764-772.

The Thermal Analysis of BR-100: A Barge/Rail Nuclear Spent Fuel Transportation Container, A. B. Copsey, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p. 1848-1854.

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, S. L. Marra, R. E. Ed-wards and C. M. Jantzen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924.

Transport of Multiassembly Sealed Canisters, R. D. Quinn, R. A. Lehnert and J. M. Rosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Transportation, Interim Storage, and Disposal Alterna-tive for Vitrified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

Underground Refrigeration Outlets, Clay Waseen, (Ports '92, David Torseth, ed., 1992), p682-694.

Universal Storage/Transport/Disposal Packages, Marvin L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p228-232.

Data Needs for Locating Emergency Response Units, George F. List, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p437-441.

Demands Placed on Waste Package Performance Testing and Modeling by Some General Results of Reliability Analysis, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p994-1002.

Hazardous Waste Containment with a Bentonite Cutoff Wall, Chikashi Sato, Derek A. Braithwaite, Angelos Protopapas and Paul P. Stewart, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1298-1310.

In Situ Testing Program at the Waste Isolation Pilot Plant, T. M. Schuitheis, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1090-1091.

An Inside Look at the 40 CFR 191 Containment Require-ments, Floyd L. Galpin, Raymond L. Clark and Care-line Petti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1047-1054.

Seismic Stability Analysis of Landfill, Max Y. Ma, Albert T. Yeung and An-Bin Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724.

STACE: An Integrated Code for Evaluating Spent-Fuel Transport Cask Containment, Kevin D. Seager, Philip C. Reardon and Peter R. Barrett, Ufligh Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1765-1769.

Structural Credit for Depleted Uranium Used in Trasnport Casks, R. Salzbrenner, G. W. Wellman, K. B. Sorenson and P. McConnell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2241-2248.

Theory and Experiments on Subsurface Contaminant Sorption Systems, Kirk Hatfield, David Burris, Thom-as B. Stauffer and Joe Ziegler, EE May/June 92, p322-

Containment vessels
Evaluation of Collection-Well Parameters for DNAPL, K.
Schmidtke, E. McBean and F. Rovers, EE Mar./Apr.
92, p183-195.

Benthic Exchange of Toxic Contaminants, Steve C. McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik.

ed., 1992), p386.

Boundary-Conforming Coordinate System for Ground-water and Contaminant Transport Modeling, Xiaoxia Zhao and Victor L. Zitta, (Hydraulic Engineering: Sa-ning a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p192-197

1992, p192-197.
Characterization of a Heavy Metal Contaminated Site, M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty, I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p463-467.
Clean-Up of Contaminated Soils: A Necessary First Step in Industrial Land Redevelopment, Dennis D. Lang, (Ports '92, David Torseth, ed., 1992), p301-315.

(rous 92, Davia Lorseth, ed., 1992), p301-315.
Comparison of Numerical Modeling Approaches for Subsurface Immiscible Contaminant Transport, Klaus Rathfelder and Linda M. Abriola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p275-280.

Contaminant Groundwater Interception—RMA, S. Paul Miller and William L. Murphy, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1171-1176.

Contaminant-Grout Interaction, Stephan A. Jefferis, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 393-1402.

Contaminated Sediment Transport During Floods, Thomas A. Fontaine, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Naui G. Bhowmik, ed., 1992), p210-

Control of Contaminant Transport in Estuaries, Nikolaos D. Katopodes, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p370-381.

Critical Issues Related to a Combined Probabilistic Nu-merical Analysis of Contaminant Transport in Porous Media, Jeffrey D. Cawlfield and Ming-Chee Wu, (Prob-abilistic Mechanics and Structural and Geotechnical Reliabi

Criticality Safety of TRU Storage Arrays at the Waste Isolation Pilot Plant, William A. Boyd and Mark W. Fecteau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2069-2077.

Committee, 1992), p2009-2017.

Development of a Comprehensive Modeling System for Remediation of Contaminated Groundwater, Jeffery P. Holland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1178-1183.

The price The Elevis Rest of Network Media for Contamination of the Contamina

ed. and Nani O. Browmik, ed., 1992, p.11/6-1183.

Dynamic Plug Flow Reactor Network Model for Contaminant Transport in Water Distribution Systems, James Uber, Ken Hickey, Mao Fang and Lew Rossman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p772-777.

Electrokinetic Soil Processing (A Review of the State of the Art), Yalcin B. Acar, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1420-1432.

Electroosmotic Contaminant-Removal Processes, Burton A. Segall and Clifford J. Bruell, EE Jan./Feb. 92, p84-100.

Electroosomotic Removal of Gasoline Hydrocarbons and TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Moham-med N. Chang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p975-988.

Steven A. Frignes, ed., 1992), p975-988.
Estimating the Consequences of Significant Fracture
Flow at Yucca Mountain, John H. Gauthier, Michael
L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992), p891-898.

ield Measurements of Tracer Gas Transport Induced by Barometric Pumping, R. H. Nilson, W. B. McKinnis, P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F. Smith, (High Level Radioactive Waste Management High Level Radioactive Waste Management Program Committee, 1992), p710-716. Field Measurem

Fingerprint Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluores-cence, Daniel York Phart, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p579-584.

The Impact of Thermal Loading on Repository Performance at Yucca Mountain, Thomas A. Buscheck and John J. Nitao, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1003-1017.

Jet Grouting in Contaminated Soils, Herff N. Gazaway and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p.206-214.

Mass Transfer of Volatile Contaminants in Showers, John C. Little, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Methodology Developed by the French National Nuclear Waste Management Agency (ANDRA) for the Performance Assessment of a Deep Geological Repository, P. Raimbault, C. Izabel and J. M. Peres, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p510-516.

Mobilization and Removal of Contaminants Associated with Urban Dust and Dirt, Brian A. Dempsey, Yuan-Liang Tai and Stuart Harrison, (Environmental Engi-neering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p486-491.

Modeling of Soil Venting Processes to Remediate Unsaturated Soils, Suresh Lingineni and Vijay K. Dhir, EE Jan./Feb. 92, p135-152.

Modelling the Effect of Atmospheric Emissions on Groundwater Composition, Theresa J. Brown, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2318-2322.

New Tools to Aid in Scientific Computing and Visualiza-tion, Michael G. Wallace and Tracy L. Christian-Frear, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p462-468.

Ongoing Monitoring Results Pilot Stormwater Disposal Facilities, Pierce County, Washington, Molly Adolfson and Dan Clark, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p510-515.

Perceptions, Sensitivity, and Solutions; Water Quality 2000, John B. Pearce, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-43.

p39-43.
Pilot-scale Anaerobic Biological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapil Sabharwal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450.

Plume Movement and Mixing in Heterogeneous Aquifer, Salwa Rashad, John Hoopes, Craig Fergusson and Tswn-Syau Tsay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p180-

The Potential Fate of Particulate Contaminants from the Rehabilitated Ranger Uranium Mine, S. J. Riley and P. W. Waggitt, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p884-889.

Predicting Effluent PCBs From Superfund Site Dredged Material, Edward L. Thackston and Michael R. Paler-mo, EE Sept./Oct. 92, p657-665.

Principles of Ground Modification with Electromagnetic Waves, J. C. Santamarina and Y. N. Wakim, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1380-1392.

Properties of Solidified/Stabilized Chromium Contami-nated Soil, Beth C. Fleming and M. John Cullinane, Jr., (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1204-1209.

Removal of 1,2 Dibromo-3-Chloropropane by Counter-current Cascade Air Stripping, N. Nirmalakhandan, Won Jang and Richard E. Speece, EE Mar./Apr. 92, p226-237

Removal of Extremely Low Levels of Munitions in a Drinking Water Supply, R. Mark Bricka and Wayne Sharp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992.), p1190-1196.

Removal of Trihalomethane Precursors by Ferric Chlo-ride Coagulation, Anne Studstill and Appiah Amirtharajah, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p526-531.

Removal of VOCs and TEL in Iron-Rich Groundwaters, James E. Rumbo, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p116-121.

A Review of Mathematical Models for Fine Sediment Transport Processes, Y. Peter Sheng, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p381-385.

Jacob Bolista Contaminant Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1370-1378.

Stabilization and Fixation Using Soil Mixing, Brian H. Jasperse and Christopher R. Ryan, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1273-

A Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinipour and Vincent M. Gorokhovski, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p186-191.

A Systems Approach to Water Recycling Research, Jon Schulz and JoAnn Silverstein, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1996-2007.

Theory and Experiments on Subsurface Contaminant Sorption Systems, Kirk Hatfield, David Burris, Thom-as B. Stauffer and Joe Ziegler, EE May/June 92, p322-

hree-Dimensional Finite Element Modelling of Near-Field Contaminant Transport in a Nuclear Fuel Waste Disposal Vault, Tin Chan and Frank Stanchell, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), 2012, 301 1992), p297-303.

Treatability Study of Granular and Biological Activated Carbon for Groundwater Containing Fenac, a Herbicide, Chen-yu Yen and Rong-Jin Leu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p104-

Use of Contaminant Mobility and Transport Parameters to Determine Water Testing Protocol, Paul D. Robil-lard and Perry B. Kubek, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p831-836.

Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, Dennis L. Corwin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p152-157.

Visualization of Groundwater Contaminant Parameters, Gregory D. Comes, James Warner and S. Paul Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1177.

aste Water Management at Bulk Terminals, Peter White, (Ports '92, David Torseth, ed., 1992), p178-188.

Water Reduction as Justification for Permit Backsilding, Gary W. Siegel and Margaret L. Dwyer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156.

Yucca Mountain Project Total-System Performance Assessment Preliminary Analyses: Overview, R. W. Barnard and H. A. Dockery, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p874-881.

An Assessment of Environmental Costs Associated with Crude Oil Pipeline Damage Caused by Earthquakes, Ronald T. Eguchi, Susan D. Pelmulder and Hope A. Seligson, (Lifeline Earthquake Engineering in the Cen-tral and Eastern U.S., Donald B. Ballantyne, ed., 1992), p153-167.

Computer Codes for Modeling Multi-Phase Flow and Transport in the Subsurface, Paul K. M. van der Heijde, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p31.

Defensive Engineering Can Be Dangerous, Nicholas Al-bergo, CE Oct. 92, p6.

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, James D. Bowen, Steven H. Wolf and Curtis A. Meininger, (Ports '92, David Torseth, ed., 1992), p443-455.

Electrokinetic Cleanups, Yalcin B. Acar, CE Oct. 92,

Environmental Aspects of Lunar Helium-3 Mining, G. L. Kulcinski, E. N. Cameron, W. D. Carrier, III. and H. H. (Jack) Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p606-616.

Environmental Engineering Options for Managing Con-taminted Sediment, Norman R. Francingues, Jr. and Daniel E. Averett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p994-999.

Excavations and Contamination, Bryan P. Sweeney and Joel S. Mooney, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p26-45.

Field Analysis of Contaminated Sediments by Immunoas-say, Deborah J. Mossman, Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p110-

Ground-water Policy-making Support: USEM Optimiza-tion Modeling Plus GIS and Graphics, Richard C. Peralta, Christopher M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza, Douglas Ramsey and Kurt Vest, (Ir-rigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992), p305-310.

1992), p305-310.
Guidance for Decontamination of Debris, Mackenzie L. Davis, Gene P. Chou, William G. Sproat, Jr. and Peter J. Shields, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p49-34.
Mars Containers: Dust on Teflon Sealing Surfaces, H. V. Lauer, Jr. and J. H. Allton, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p508-517.

Microorganism Survival in Ice-Covered Marine Environ-ment, S. J. Stanley, D. W. Smith and G. D. Milne, CR June 92, p58-72.

Migration of Spilled Oil from Ruptured Underground Crude Oil Pipelines in the Memphis Area, Otto J. Helweg, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p140-152.

unu unu cassert U.S., Donald B. Ballantyne, ed., 1992), p140-152.

Mitigation of Dust Contamination During EVA Operations on the Moon and Mars, Peter E. Glaser, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1512-1522.

Multiuser Sites for Contaminated Sediment Disposal, Pieter N. Booth and Kimberly A. Henson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p96-101.

Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwillo and Rudy S. Chow, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pietre Linaweaver, ed., 1992), p12-17.

Phenol Removal from Kaolinite by Electrokinetics, Yalcin B. Acar, Heyi Li and Robert J. Gale, GT Nov. 92, p1837-1852.

p1837-1852.

Principtes of Ground-Water Protection, David W. Miller, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p86-91.

Rapid Detection of Hydrocarbon Contamination in Ground Water and Soil, A. M. Chrestman, G. in Comes, S. S. Cooper and P. G. Malone, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1165-1170.

Resementative Life Support Technology Challenses for the

Somutons, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1165-1170.

Regenerative Life Support Technology Challenges for the Space Exploration Initiative, Vincent J. Bilardo, Jr. and Ronald L. A. Theis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1748-1764.

Sediment Sampling Techdiniques in Complex Environments, John J. Nocera, Gregory P. Matthews and Thomas M. Simmons, (Environmental Engineering: Saving a Threatened Resource-In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p92-97.

Space Habitat Environmental Health: A Systems Issue, Jon R. Schulz and Ralph N. Eberhardt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2023-2034.

Statistical Decision Analysis for Interception Wells, Hewa A. Wijedasa and Marian W. Kemblowski, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p116-121.

121.
Continental shelves
3D Hydrodynamic Model Validation Through Simulations of Dynamic Processes, Leif H. Slordal, Eivind A. Martinsen and Alan F. Blumberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p525-537.
Uurricane Camille Shelf Wave Simulation Using a Numerical Ocean Circulation Model, Le Ngoc Ly and Lakshmi Kantha, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p586-593.
The Physiography and Engineering Constraints of the

Ed., 1772), p380-393.
The Physiography and Engineering Constraints of the Continental Slope in the Northwestern Gulf of Mexico, William R. Bryant and Gregory R. Simmons, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1036-1050.

Propagation of Long Waves Onto Shelf, Derek G. Goring and Fredric Raichlen, WW Jan./Feb. 92, p43-61.

Costingercy
An Analysis of Contingencies for Making Casks Available
for Use During the Early Years of Federal Waste Management System Operations, P. E. Johnson, D. S. Joy,
R. B. Pope, L. B. Shappert, M. W. Wankerl, R. E. Best,
F. L. Danese and S. Schmid, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1310-1316.

Minimizing the Risk and Impact of Tanker Accidents, C. S. Birt and A. J. Jordan, (*Ports '92*, David Torseth, ed., 1992), p670-681.

Continuing education Beyond Push-Button GPS, Alfred Leick, CE June 92, p75-76.

Delineating Theory for GPS Surveying, Alfred Leick, SU May 92, p33-42. Educational Needs of Civil Engineers in Management, Mark O. Federle, James E. Rowings, Jr. and Carlos Es-pana, ME Apr. 92, p192-207.

Educational Program for Hazardous-Waste Management, Carol J. Miller, Ralph H. Kummler, James H. McMick-ing and Robert W. Powitz, El Apr. 90, p221-228. Ph.D. Roadblocks for Experienced Engineers, Bruce E. Marsh, El Jan. 90, p56-60.

Portrait of a Manager, Paul Tarricone, CE Aug. 92, p52-

Continuous beams
Distortional Buckling Solutions for Continuous Composite Beams, Mark Andrew Bradford and Zhi Gao, ST
Jan, 92, p73-89.

Application of Submarine Pipelines, 2001.07

Elastic Analysis of Submarine Pipelines, Poon-Hwei Chuang and David Lloyd Smith, ST Jan. 92, p90-107.

Prestress Influence on Shear-Lag Effect in Continuous Box-Girder Bridge, Shih Toh Chang, ST Nov. 92, p3113-3121.

Continuum mechanics

Analysis of Welded Tubular Connections Using Continuum Damage Mechanics, William F. Cofer and Jihad S. Jubran, ST Mar. 92, p828-845.

Soundary-Element Direct Reanalysis for Continuum Structures, J. H. Kane, B. L. Keshava Kumar and R. H. Gallagher, EM Aug. 92, pl 679-1691. Elastic Buckling of Rectangular Plates with Curved Inter-nal Supports, K. M. Liew and C. M. Wang, ST June 92, pl 480-1493.

Functional Analysis in Continuum and Structural Mechanics, C. A. Nelson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p514-518.

Geometric Damage Tensor Based on Microplane Model, Ignacio Carol, Zdeněk P. Bažant and Pere C. Prat, EM Oct. 91, p2429-2448.

Microplane Model for Cyclic Triaxial Behavior of Con-crete, Joško Ožbolt and Zdeněk P. Bažant, EM July 92, p1365-1386.

ph/30-1360.

Particle Analysis of Material Behavior—A Note on Continuum Assumptions, John R. Williams, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl/9-183.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166.

Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200.

Strain-Based Damage Deactivation in Concrete, N. R. Hansen and H. L. Schrever, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p486-489.

Wave Attenuation in Viscoelastic Continuum with Fad-ing Memory, Song-tao Xue, Jun Tobita, Tetsuya Han-zawa and Masanori Izumi, EM Aug. 92, p1597-1611.

Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, [Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p19-24.

Contract administrati

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Jasetskis, CO. Sept. 72, po12-024.
Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R.
Martin Ponderlick, CO Sept. 92, p472-487.
Schedule "Games" People Play, and Some Suggested
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Contract terms
Contractor Watches Clock on Bridge Rehab, CE Sept. 92, Manholes and Microtunneling, Evarett Cruz, Jr., CE Dec. 92, p52-55.

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Strategies in Risk Management of On-Demand Guarantees, Robert L. K. Tiong, CO June 92, p.229-243.

tees, Robert L. K. Hong, Co June 72, passages, Contracting
The Design/Build Advisor System: Integration of Databases with a Knowledge-Based System, Annette L. Stumpf and Thomas R. Napier, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p950-958.
Frontloading for Successful Team-Built Projects, Louis J. Martinez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p504-507.

Contractors

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92, p.26.
Design Engineer/Contractor Bankruptcy: Considerations for Debtor and Creditors, Jeffrey S. Russell and James J. Casey, Jr., ME July 92, p.278-297.
Economic Factors in Roller Compacted Concrete Dam Construction, John W. Parker, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p.227-241.
Ethical, Legal and Professional Responsibilities of Engineers to Owners and Contractors, Lawrence I. Erdos, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.989-1002.
Heavy Construction Estimates, With and Without Com-

ed., 1992), p989-1002.

Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

Howdy, Partner, Paul Tarricone, CE Mar. 92, p72-74.

Improper Uses of Construction Specifications, Bryce Simons, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p316-324.

Minority, Women and Small Contractors Boosted in NYC, CE June 92, p22,24.

Overhead and Profit on Change Orders, Hamid Sarvi, CE Aug. 92, p59-61.

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Aug. 92, p59-61.
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 Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.
 RCC Dam Construction—A Contractor's View, Jeffrey C. Allen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-226.

226.
R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar, 92, p3-16.
Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.
Throughput Study for the Civilian Radioactive Waste Management System, Peter Gottlieb, William Bailey, III., Flora Emami, Lawrence M. Ford and John F. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Togram Committee, 1992), p1349-1358.
Underwriting Process for Construction Contract Bonds,

Committee, 1992), p1.349-1338. Underwriting Process for Construction Contract Bonds, Jeffrey S. Russell, ME Jan. 92, p63-80. Unit Pricing and Unbalanced Bids, Norman A. Nadel, CE June 91, p62-63. Using Price Adjustment Clauses to Reduce Risk, Michael C. Loulakis and William L. Cregger, CE Sept. 92, p40.

Wage Requirement Stifles Competition, CE Jan. 92, p27. Contracts
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Abandoned Contract Can Prompt Liquidated Damages, CE Mar. 92, p30.
Agricultural Option Contracts, John F. Scott, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p138-143.
Arbitration Doesn't Conflict with Courts, CE Nov. 92,

Arbitration Document Community
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Bidding Strategy: Winning over Key Competitors, F. H.
(Bud) Griffis, CO Mar. 92, p151-165.
Comprehensive Liability Doesn't Cover the Product, CE
June 92, p31.

Cost Effective Risk Allocation for Coastal Engineering Projects, Robert J. Smith, (Coastal Engineering Prac-tice '92, Steven A. Hughes, ed., 1992), p1021-1036. Court Claims Wyoming City Prefers Too Much, CE May

92, p28. Courts Furth er Define an Improvement to Realty, CE

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ritical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCar-thy, CO June 92, p217-228. he Development of the Construction Engineer: Pest Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Sepi. 91, 9380-392.
 Dialogue on Political Contributions and Engineering, William E. Norris, El Jan. 90, p38-41.
 Engineering Pre-engineered Buildings, Alexander Newman, CE Sept. 92, p58-61.
 Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.
 Indemnification Clarification, CE Aug. 92, p22.
 Intelligent Retrieval System for Conditions of Contract Documents in Construction, Ayman A. Morad and Luis Arditi Rocha. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p737-745.
 Multiparameter Bidding System—Innovation in Contract

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Multiparameter Bidding System—Innovation in Contract
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Only Taxpayers Can Question Bids, CE Dec. 92, p.28.
Overhead and Profit on Change Orders, Hamid Sarvi, CE
Aug. 92, p.59-61.
Pricing of Services, Charles S. Hodge, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p.1089-1094.

Proper and Improper Use of Specifications, Ronald D. Kulchak, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p311-315.

1992), p311-315.
Protecting Engineer Against Construction Delay Claims: NDC, David M, Leishman, ME July 91, p314-333.
Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.
Realistic Specifications for Steel Bridge Painting, Luh-Maan Chang and Machine Hsie, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p299-310.
Resolving Construction Disputes by Mediation: Hong Kong Experience, Kwok-Wing Chau, ME Oct. 92, p384-393.

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Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-

779.
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Risk Reduction Through Indemnification Contract Clauses, Peyton E. Hutchens, ME July 92, p267-277.
Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.
Site Event Advisor: Expert System for Contract Claims, James E. Diekmann and Knut Gjertsen, CP Oct. 92, p472-479.

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Balancing Hydraulic Requirements for Storage and Diversion in Planning Subsurface Facilities for the Control of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.

Biochemical Control of Sulfide Production in Wastewater Collection Systems, Ricardo B. Jacquez and Hamdy H. El-Rayes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p327-333.

Design/Control Optimization of Cross-Ply Laminates

Linaweaver, ed., 1992), p327-333.

Design/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, J. M. Sloss, I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137.

Dust Control Research for SEI, Kriss J. Kennedy and Jeffrey R. Harris, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p398-407.

Dust Controller Keeps it Down, CE Aug. 92, p77.

Frequency Based Control of Urban Blasting, Charles H. Dowding, [Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p181-211.

Object-Oriented Programming in Robotics Research for

Object-Oriented Programming in Robotics Research for Excavation, Darcy M. Bullock and Irving J. Oppenheim, CP July 92, p370-385.

neim, CP July 92, p3/0-385.
Optimal Aquifer Management for Controlling Land Subsidence, Theodore G. Cleveland and Lu-Chia Chuang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p872-877.
Restricting Rockfalls, Richard D. Andrew, CE Oct. 92,

Summary of Roundtable Discussion on Transportation Control Strategies, Edward C. Sullivan, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p279-282.

Yield Safety, Cracking Control, and Moment Redistribu-tion, M. Z. Cohn and Paolo Riva, ST Feb. 92, p447-

Control structures
Comparison of ARS-Type Grade Control Model Testing
and Prototype Response, C. Watson, N. Raphelt, P.
Combs and S. Abt, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p213-

Computation Method for Regulating Unsteady Flow in Open Channels, Fubo Liu, Jan Feyen and Jean Berlamont, IR Sept./Oct. 92, p674-689.

Design and Maintenance of Rural Water Supply Systems for Improved Performance, Paul D. Robillard and Ronald L. Droste, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p523-528.

p525-528.
Reliability of Controlled Structures Subject to Real Parameter Uncertainties, B. F. Spencer, Jr., C. Montemagno, M. K. Sain and P. M. Sain, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p369-372.
Restricting Rockfalls, Richard D. Andrew, CE Oct. 92, p66-67.

Control systems

Adaptive Control of Ground-Water Hydraulics, LaDon
Jones, WR Jan/Feb. 92, p1-17.

Jones, WR Jan./Feb. 92, pl-17.
Advanced Software Design and Standards for Traffic Signal Control, Darcy Bullock and Chris Hendrickson, TE May/June 92, p430-438.
The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257.

Architectures for Mission Control at the Jet Propulsion Laboratory, Roger A. Davidson and Susan C. Murphy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1567-1578.
Assismic Hybrid Control of Nonlinear and Hysteretic Structures 1, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1423-1440.
Assismic Hybrid Control of Nonlinear and Hysteretic Structures II, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1441-1456.
Bassase System Implementation at DIA Louis S. Nelson.

Assismic Hybrid Control of Nonlinear and Hysteretic Structures II, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, pl441-1456.

Baggage System Implementation at DIA, Louis S. Nelson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p235-238.

Control of Contaminant Transport in Estuaries, Nikolaos D. Katopodes, (Estuarine and Coastal Modeling, Malcolm I. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p370-881.

Control of Hysteretic System Using Velocity and Acceleration Feedbacks, J. N. Yang, Z. Li and S. C. Liu, EM Nov. 92, p2227-2245.

Design of Control Algorithm for Operation of Irrigation Canals, J. Mohan Reddy, Amadou Dia and Ahmed Oussou, IR Nov/Dec. 92, p852-867.

Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p25.

ET from Shallow Groundwater Maintained by Controlled-Drainage/Subirrigation System, James L. Fouss, and James S. Rogers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p594.

Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Morrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210.

Graphical Models for Simulation and Control of Robotic Systems for Waste Handling, William D. Drotning and Phil C. Bennett, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p374-479.

Identification of Control System, Robert Brouwer and Peter Wonink, IR May/June 92, p360-369.

Impact of the New Denver Airport on the Air Traffic Control System, Water E. Flood, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p374-479.

Identification of Control System for Canal with Night Storage, Wytze Schuurmans, Robert

p573-578.

Machine Learning in Planning and Control, Shaopei Lin, Zhenyi Zhao and Yingjian Soong, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p991-998.

Modern Crane Control Enhancements, Jeffrey T. Hubbell, Bruce Koch and Dennis McCormick, (Ports '92, David Torseth, ed., 1992), p757-767.

Multireservoir Sewer-Network Control via Multivariable Feedback, A. Messmer and M. Papageorgiou, WR Nov./Dec. 92, p585-602.

A Nov./Dec. 92, p585-602.

A Symposium, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p631-638.

Quality Assurance in a Cask Fleet Parts Control System.

Quality Assurance in a Cask Fleet Parts Control System, Charles Fernandez, P. N. McCreery and L. B. Shappert, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1343-1348.

mittee, 1992), p.1343-1348.
Simultaneous Design and Control of Stiffened Laminated Composite Structures, Luis Mesquita and Manohar P. Kamat, AS Jan. 92, pl.11-126.
Soft Touch People Mover Central Control, R. D. Milnes, R. S. Fahringer and J. B. Bojarski, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p199-206.

Study of Open-Channel Dynamics as Controlled Process, Yuri A. Ermolin, HY Jan. 92, p59-72.

Supervision and Automatic Control of Robotic Systems in Nuclear Environments, J. Benner and K. Leinemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p966-973.

Urban Transit Guides Application of Advanced Train Control, Sesto Vespa and Tom Parkinson, TE Jan./Feb. 92, p146-159.

Water-Level Control in Hydropower Plants, Oscar F. Jiménez and M. Hanif Chaudhry, EY Dec. 92, p180-

Wave-Motion Stability in Canals with Automatic Con-trollers, Simion Hancu and Paul Dan, HY Dec. 92, p1621-1638.

# Control theory

Quasi-Three-Dimensional Optimization Model of Jakar-ta Basin, Brad A. Finney, Samsuhadi and Robert Willis, WR Jan./Feb. 92, p18-31.

State-Space Analysis and Control of Slow Transients in Pipes, Masashi Shimada, HY Sept. 92, p1287-1304.

Aspects of Parallel Processing in Reservoir Simulation, Richard Ewing, Patrick O'Leary and James Sochacki, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p111-114.

Combined Natural Convection and Surface Radiation in the Annular Region Between a Volumetrically Heated Inner Tube and a Finite Conducting Outer Tube, S. E. Gianoulakis and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p805-812.

Convective Heat Transfer in Spent Fuel Canisters, M. Keyhani and F. A. Kulacki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p773-778.

General Mechanism of Turbulence, Wenxiong Yang, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.

MRS Using a FUELSTORMT Vault, M. K. Valentine and H. Günther, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1875-1882.

Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p539-542.

Converger

Dynamic Analysis of Elastoplastic Softening Discretized Structures, C. Comi, A. Corigliano and G. Maier, EM Dec. 92, p2352-2375.

Nonlinear Analysis of Steel Space Structures, Ram Chan-dra, D. N. Trikha and Prem Krishna, ST Apr. 90,

p898-909.

Numerical Methods 101—Convergence of Numerical Models, David B. Thompson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p398-403.

## Conversion

Metric Construction Cost Data Available, NE Sept. 92. p14.

Transient Hydraulic Model for Simulating Canal-Network Operation, F. N. Gichuki, W. R. Walker and G. P. Merkley, IR Jan./Feb. 90, p67-82.

### Conveyors

Bulk Commodity Terminals—Planning for the Future Competitive and Environmental Challenges, Gordon W. Zonailo, (*Ports '92*, David Torseth, ed., 1992), p695-708.

Sludge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Ba-log, Manu A. Patel and Turgay M. Ertugrul, [Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p303-308.

Technology—Key to Environmental Success, Paul Soros, (Ports 92, David Torseth, ed., 1992), p189-202.

Cooling
Coupled Heat and Moisture Transport Model for Underground Climate Prediction, G. Danko and P. Moussel-Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p90-798,
MRS Using a FUELSTOR<sup>MT</sup> Vault, M. K. Valentian and H. Günther, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1875-1882.
Underground Refrigeration Outlets, Clay Waseen, (Ports '92, David Torseth, ed., 1992), p682-694.

Cooling syste

Cooling systems
Assessment of Impacts Associated with Alternate Cooling
System Designs for an Electric Power Station, Steven
H. Wolf, James D. Bowen, Donald P. Galya and Frank
S. Smith, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p.226-231.

Design Optimization of Passively Cooled Room, Sydney
C. K. Chu and Piyawat Boon-Long, EY Apr. 92, p18-

37.

Three-Dimensional Thermal Jump in Stratified Cooling Channel, L. -L. Guo and R. E. Baddour, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p381-384.

Cooling towers
Nutrient Removal for Two Industrial Recycling Projects,
Richard Sykes, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992, p382-387.
Liniweaver, ed., 1992, p382-387.

Tolerance Limits for Geometric Imperfections in Hyper-bolic Cooling Towers, A. Alexandridis and N. J. Gard-ner, ST Aug. 92, p2082-2100.

Cooling water

Cooling water
Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p605-610.

Behavior of Thermal Wedges in Oscillating Reservoir Flow: A Case Investigation, Vahid Alavian, Neil Sutherland and Ming Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p501-506.

Municipal Wastewater for Power Plant Cooling Water.

p301-306.

Municipal Wastewater for Power Plant Cooling Water.

Impacts on a Flow-Limited River, Mark Gerath, Fred
Sellars, Monique Villars and Lisa Wolf, (Environmental Engineering: Saving a Threatened Resource—In
Search of Solutions, F. Pierce Linaweaver, ed., 1992),
p122-127.

Prediction Method for Local Scour by Warmed Cooling-Water Jets, S. Ushijima, T. Shimizu, A. Sasaki and Y. Takizawa, HY Aug. 92, p1164-1183.

Use of Density Current to Modify Thermal Structure of TVA Reservoirs, Vahid Alavian and Pete Ostrowski, Jr., HY May 92, p688-706.

Cooperation

Benefits of International Technical Collaboration, Thomas H. Isaacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32.

Communication Creates Quality, Nips Conflict (Itr), Teck L. Chua, CE Nov. 92, p34,36.

Competition Leads to Losing, Frank Pierce Johnson, ME July 90, p258-261.

July 90, p.298-291.

A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, K. Branch, N. Coburn, G. Curtis, J. Holm and S. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p156-160.

Future Concerns in Environmental Engineering Graduate Education, Richard G. Luthy, David A. Bella, James R. Hunt, James H. Johnson, Desmond F. Lawler, Charles R. O'Melia and Frederick G. Pohland, El Oct. 92.

p361-380.

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, Howdy, Partner, Paul Tarricone, CE Mar. 92, p72-74.

Issues in Developing Control Zones for International Space Operations, Blair A. Nader and Kumar Krishen, AS Oct. 92, p387-404. Planning for Water Conservation Through Irrigation System Modernization and Rehabilitation, A. K. Dimmitt, K. I. McLaughlin, F. Z. Kamand and D. G. Welch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299.

1992), p294-299.
Promoting Private Irrigation Development: The Irrigation Sector Program Experience in Nepal, Richard Reidinger and Upendra Gautam, (Irrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman, ed., 1992), p221-226.
RCC Dam Construction—A Contractor's View, Jeffrey C. Allen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-226.

Understanding the High-Level Radioactive Waste Program Through the Cooperative Agreement Process, L. Cheryl Runyon, Millard Peck, III. and Glenn H. Gardner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p152-155.

Coordinates Generalized Isoparametric Coordinate Determination Scheme for Finite Element Mesh Generation, Victor N. Kaliakin, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p928-931.

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert Logcher, CP Jan. 92, p85-105.

Copper
Assessing Cu(II) Speciation and Transport in the New York Bight, A. B. M. Badruzzaman and Wu-Seng Lung, (Estuarine and Coastal Modeling, Malcolm L. Spauloing, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p476-488. Multi-Barrier, Copper-Base Containers for HLW Disposal, Dale T. Peters, Konrad J. A. Kundig, David F. Medley and Paul A. Enders, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p366-376.

Coral reets

Costal Processes and Engineering on a Micronesian

Fringing Reef, Stanley J. Boc, Jr., William J. Reynold
and Jasmina M. Dobinchick, (Coastal Engineering

Practice '92, Steven A. Hughes, ed., 1992), p283-302.

Remote Automated Wave and Water Level Monitoring

System Deployed at Agat Harbor, Guam, David D.

McGehee, (Coastal Engineering Practice '92, Steven A.

Hughes, ed., 1992), p898-907.

High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheinman, EM May 92, p1026-1043.

Core walls

Wall, Chikashi Sato, Derek A. Braithwaite, Angelos Protopapas and Paul P. Stewart, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1298-

1310.
Selection and Laboratory Evaluation of Modifying Additives for Soil-Cement-Bentonite, T. S. McFarlane and R. D. Holtz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1006-1018.
Use of Cement-Bentonite for Cutoff Wall Construction, B. L. Kilpatrick and S. J. Garner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p803-815.

Linear Surface Waves Over Rotating Fluids, Ting-Kuei Tsay, WW Mar./Apr. 91, p156-171.

Corporate planning

Thoughts on Management of Acquisitions, Melville Hen-sey, ME Apr. 92, p130-137.

Vertical Business Integration Strategies for Construction, Robert C. Krippaehne, Bob G. McCullouch and Jorge A. Vanegas, ME Apr. 92, p153-166.

Corporations
Thoughts on Management of Acquisitions, Melville Hensey, ME Apr. 92, p130-137.

sey, ME Apr. 92, p130-137.

Correlation analysis
The Effect of Wave Grouping on the Characteristic Wave
Height, Chia Chuen Kao, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedwecki, ed.
1992), p83-86.

A Method for Relating Impacts with Yielding and
Unyielding Targets, D. J. Ammerman, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p2255-2259.

onte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Strength Correlation Factor for Residual Soils, N. Lo-ganathan, Suraj de Silva and A. Thurairajah, GT Apr. 92, p593-610. Suspended Sediment-Transport Capacity for Open Chan-net Flow, Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204.

Correlation techniques Salinity of Rivers: Transfer Function-Noise Approach, Dolores Quilez, Ramón Aragüés and Kenneth K. Tanji, IR May/June 92, p343-359.

Advancing Anchorage Technology, Stuart Littlejohn, CE July 92, p61-64. Analysis of Corroded Reinforced Concrete Sections for Repair, Ying-Su Yuan and Marton Marosszeky, ST July 91, p2018-2034.

Repair, Ying-Su Yuan and Marton Marosszeky, ST
July 91, p2018-2034.

Bond Strength of Straight GFRP Rebars, S. Tao, M. R.
Ehsani and H. Saadatmanesh, (Materials: Performance
and Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p598-605.

Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and
Failures, Thomas D. White, ed., 1992), p325-338.

Chloride Binding Capacity in Cement-Fly-Ash Pastes, O.
A. Kayyali and M. Sh. Qasrawi, MT Feb. 92, p16-26.

Concrete Deterioration, East Los Angeles County Area:
Case Study, Gregory F. Rzonca, Robert M. Pride and
Dean Colin, CF Feb. 90, p24-29.

Corrosion Cracking in Relation to Bar Diameter, Cover,
and Concrete Quality, Rasheeduzzafar, S. S. AlSaadoun and A. S. Al-Gahtani, MT Nov. 92, p327-342.

Corrosion Fatigue of Deepwater Offshore Materials, Gordon F. Fowkes and Harris L. Marcus, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992),
p694-703.

p694-703.

p694-703.
Corrosion Lifetime Assessment for Candidate Materials of Geological Disposal Overpack for High-Level Nuclear Waste Canisters—Perspective of R&D in Japan, Hidekazu Asano, Hisao Wakamatsu and Masatsune Akashi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1658-1669.
Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, E. Smailos and R. Köster, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1676-1680.

p1676-1680.

Fatigue Strength of Deteriorated Steel Highway Bridges, Patrick D. Zuraski and John E. Johnson, ST Oct. 90, p2671-2690.

Fatigue Strength of Riveted Bridge Members, John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981.

p2968-2981. Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, J. Larralde, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654. Incorporating Corrosion in Reliability-Based Design of Anchored Bulkheads, M. J. S. Roth, T. C. Sandford and H. J. Dagher, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p160-163.

P. O'Connor, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p505-518.

Microbiologically Induced Corrosion, P. J. B. Scott and Michael Davies, CE May 92, p58-59.

Modeling of Localized Electrochemistry Within Occluded Regions, Maureen J. Psaila-Dombrowski, Alan Turn-bull and Ronald Ballinger, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1687-1694.

management rrogram Committee, 1992), p1687-1694.
Performance of Epoxy-Coated Steel in Continuously Reinforced Concrete Pavement, Farrel J. Zwerneman, Rex C. Donahey, Hameed S. Syed and Srinivas R. Gunna, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p339-352.

Rebar Corrosion in MgSO<sub>4</sub> Solution, Mohammad Sham-im Khan and Abdul-Hamid J. Al-Tayyib, MT Aug. 92,

Residual Stress Mitigation Considerations for Waste Package Design and Closure, E. S. Robitz, Jr. and T. W. Doering, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p377-384.

Transportation of Demineralized Water: Case Study, Ali A. Quraishi and Muhammad S. Al-Amry, TE July/Aug. 92, p576-585.

72. p.310-263.
Uranyl Oxide Hydrates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, R. J. Finch and R. C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p332-337.

p332-331.
Water Main Rehabilitation Needs for the 1990's, D. Kelly O'Day, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p760-763.
Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.

Advancing Anchorage Technology, Stuart Littlejohn, CE July 92, p61-64.

Cathodic Protection Diagnostics for Corrosion Mitiga-tion of Infrastructure Components, Vicki L. Van Blari-cum, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p137-144.

and Jeff R. Wright, ed., 1992, p. 157-149.

Extended-Life Nuclear Waste Package Utilizing Redundant Corrosion/Containment Barriers, F. E. Goodwin and R. E. Westerman, High Level Radioactive Waste Management Program Committee, 1992), p. 1681-1686.

A New Look at Galvanized Bridges, Rita Robison, CE July 91, p52-55.

Put to the Test, Paul Tourney and Neal Berke, CE Dec. 92, p62-63.

Seismic Rehabilitation of Seattle's Pier 69, David Pierce and Ronald E. Martinson, (Ports '92, David Torseth, ed., 1992), p418-428.

System Selection of Concepts for Direct Disposal of Spent Fuel, K. Einfeld, K. D. Closs and U. Knapp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1860-1866.

To Clarify and Correct (ltr), CE June 92, p37.

Tunnel Takes Cathodic Protection, Guang-Nan Fanjiang, Michael Mazzuca, Lin Nathan and Robin Pawson, CE Nov. 92, p59-61.

# Corrosion resista

Corrosion Resistance of Stainless Steels and High Ni-Cr Alloys to Acid Fluoride Wastes, H. D. Smith, K. H. Pool, D. B. Mackey and E. B. Schwenk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p620-627.

Hybrid (FRP+Steel) Reinforcement for Concrete Struc-tures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materiali: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p655-665.

Safeguarding Steel, Rita Robison, CE Apr. 92, p50-53.

Strength and Corrosion Resistance of Superplasticized Concretes, Mohammed Maslehuddin, Rasheeduzzafar and Abdulaziz Ibrahim Al-Mana, MT Feb. 92, p108-

Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.

Universal Storage/Transport/Disposal Packages, Marvin L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p228-232.

Corrugated sheets

Corrugated sheets

Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultruded Fiber-Reinforced Plastics Beams in Industrial Building Construction, Ethan A. Love and Tanongsak Bisarnsin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584.

## Corrugating

Structural Evaluation of Box Culverts, Shad M. Sargand, Glenn A. Hazen and John O. Hurd, ST Dec. 92, p3297-3314.

### Cost allocation

The Traffic Impact Study and Traffic Impact Fees, Timo-thy T. Jackson, (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p228-232.

### Cost analysis

Aesthetic Design Philosophy Utilized for California State Bridges, James E. Roberts, UP Dec. 92, p138-162.

Cost Comparison of Timber, Steel, and Prestressed Concrete Bridges, R. A. Behr, E. J. Cundy and C. H. Goodspeed, ST Dec. 90, p3448-3457.

Economic Factors in Roller Compacted Concrete Dam Construction, John W. Parker, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p227-241.

Economics of Tidal Power, T. L. Shaw, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p34-41.

Life-Cycle Cost Analysis Doesn't Work for Bridges, David Veshosky and Carl R. Beidleman, CE July 92,

pb. Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, I. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p236-259.

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Optimal Scheduling of Consecutive Landfill Operations with Recycling, Timothy L. Jacobs and Jess W. Everett, EE May/June 92, p420-429.

Pricing Armor Rock for Rubble Mound Breakwaters, R. A. Everist, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p160-169.

Statistical Decision Analysis for Interception Wells, Hewa A. Wijedasa and Marian W. Kemblowski, (Irri-gation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p116-

### Cost control

Computer Modeling of Structural Systems for Residential Scale Buildings, Richard A. Ebeltoft, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p58-65.

Cost and Quality Management, Richard Duttenhoeffer, ME Apr. 92, p167-175.

Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Ports '92, David Torseth, ed., 1992), p737-748. Landfills: Anatomy of Automated Design, Juan C. Vargas and David B. Porter, CE Mar. 92, p52-55.

Making Teamwork Work, Mel Hensey, CE Feb. 92, p68-

Project Management: Keys to Success, David Bentley and Gary Rafferty, CE Apr. 92, p58-59.

Scheduling Maintenance Dredging on Single Reach with Uncertainty, Jay R. Lund, WW Mar/Apr. 90, p211-

Cost effectiveness
Acquisition Issues, George W. Lackowitz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1031-1035.
The Affordable Space Platform: The STS External Tank, Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p945-956.
Building Better Bridges: Concrete Vs. Steel, Clifford L. Freyermuth and Andy Johnson, Cz. July 92, p66-71.
Computerized Management Systems for Pavement Networks, Kathryn A. Cation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p293-300.
Cost Effective Risk Allocation for Coastal Engineering Projects, Robert J. Smith, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1021-1036.
Decision Analysis Model for Well Rehabilitation and Groundwater Development, Moses Lake, Washington, R. H. Anderson, W. J. Roberds and D. Banton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p537-542.
Design Cable-stayed Bridge for Cost Effectiveness and Safety, Jih-Jiang Chyu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p596-62.

p59-62.
Design-Basis Flood for Rehabilitation of Existing Dams,
Anand Prakash, HY Feb. 92, p291-305.
Design-Build Goes Public, James Denning, CE July 92,
p76-79.

p76-79.

Development of Computer Automated Bridge Inspection Process, S. S. Kuo, Thomas E. Davidson and Leonard M. Fiji, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p794-801. Engineering Aspects of Wetland Design, Donald F. Hayes and Michael R. Palermo, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p344-349.

Search of Solutions, Mohammad Karamouz, ed., 1992), p344-349.

Hydraulic Design of Offshore Breakwater in Sergipe, Brazil, Otavio J. Sayao and Charles P. Fournier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693.

In-House Training, Formal Education and Public Outreach, Yolanda A. Willis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2190-2201.

Internationalization of Engineering Professions, N. D. Birrell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p983-1005.

Low-Cost Computer Techniques for Steel Truss Bridge Rehabilitation and Ratings, Robert H. Kim and Jai B. Kim, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p786-793.

Mars Via the Moon—A Robust Lunar Resources-Based Architecture, Ed Repic and Wally McClure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1603-1630.

Mass Transit Means Massive Savings, CE Mar. 92, 98.

1992), p1603-1630.

Mass Transit Means Massive Savings, CE Mar. 92, p8.

A New Era in Space Operations, Simon P. Worden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

Peaches and Concrete, Housh Rahimzadeh and Mark B. Haselton, CE Feb. 92, p42-44.

Phosphorus Removal by Automatic Backwash Filters at Back River WWTP, George G. Balog, Manu A. Patel, Thomas N. Lash and Christian Davies-Venn, (Environmental Engineering: Saving a Threatened Resource-In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p24-29.

17921, px-4-29.
Reliability-Centered Management of Wood Transmission Lines, James M. Treat, Patrick J. Hasenoehrl and Andrew H. Stewart, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p91-95.
Robotic O. Ochic Facility C. Edit.

py1-y3.

Robotic On-Orbit Fueling of SEI Vehicles, Margaret M. Clarke, David E. Haines and A. J. Mauceri, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1423-1433.

Traffic Data Collection: What Really Needs to be Done?
A. S. Narasimha Murthy, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 192), p1-5. Value-Added QA Within the High-Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1303-1309.

Cost estimates
Constructability for Drilled Shafts, John P. Turner, CO
Mar. 92, p77-93.

Planning Process Model for Small-

Mair. 92, p. 7-93. Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willen-brock and M. K. Parfitt, CO Dec. 92, p651-666. Plan Estimates Cost of Getting 'Smart', CE Oct. 92,

p24,27.

roper and Improper Use of Specifications, Ronald D. Kulchak, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p311-315.

1992), p311-315.
Cost minimization
Conguter-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.
Housing—Economic Standard, D. Eliakim, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p66-74.
Materials and Structures Synergistic with In-Space Materials Utilization, Kumar Ramohalli, Farhang Shadman and K. R. Sridhar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p714-725.

Cost plus contracts
Contractor Must Outline All Charges in Contract, CE
Dec. 92, p28.
Proof of Lost Profit Requires Cost-Plus Provision, CE

Nov. 92, p30.

Cost savings
Cargo Transport to the Lunar Surface Using a Three
Rotor Sling, Brian Tillotson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992).

Stein Stute, vo. and piloto-log piloto-log.

A Competitive Framework for Evaluating the Economic Benefits of Port Improvements, Ira Hirschman and Ogden Beeman, (Ports '92, David Torseth, ed., 1992),

Model for Optimal Design of Reinforced Concrete Beam, B. K. Chakrabarty, ST Nov. 92, p3238-3242. Modern Prisons Can Reduce Costs and Stress, CE Aug.

Modern Finesis 22, p14.

A Preliminary Report on OCR Problems in LSS Document Conversion, T. A. Nartker, J. Kanal and S. V. Rice, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2106-2108.

Solution of the Committee of the Program Committee, 1992), p2106-2108.

Solution of the Program of t

High Level Radioactive wasse transactions.

Committee, 1992), p2106-2108.

Value Engineering at a Superfund Site, Virendra Singh and Amy Monti, CE Mar. 92, p60-63.

Value Engineering in Coastal Design, Jack C. Cox, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p935-951.

The Virtual Mission: A Step-Wise Approach to Large Space Missions, Elaine Hansen, Morgan Jones, Adrian Hooke and Richard Pomphrey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1533-1529.

Cost sharing

Equity and International Agreements for CO<sub>2</sub> Containment, Dallas Burtraw and Michael A. Toman, EY Aug. 92, p122-135.

An Assessment of the Transportation Costs of Shipping Non-Fuel Assembly Hardware to FWMS Facilities, L. B. Shappert, P. E. Johnson, D. S. Joy, R. E. Best and F. L. Danese, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p190-195.

Better Use of Computer Resources, Ray Arthur Pixley, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1015-1021.

Computer Analysis Helps Lower Cost, CE Nov. 92, p87. Construction Automation Work Classification, Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p500-505.

Cost Models for Preliminary Economic Evaluation of Sprinkler Irrigation Systems, D. Kumar, C. D. Heatwole, B. B. Ross and D. B. Taylor, IR Sept./Oct. 92, p757-775.

26. p. 21-113.
Cost of Rehabilitation of Water Distribution Systems, Peter K. Mae Ewen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p. 770-771.

Development of a Phase I Prescriptive Reservoir Model, Robert D. Carl, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p667-

Environmental Engineering Options for Managing Con-taminted Sediment, Norman R. Francingues, Jr. and Daniel E. Averett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p994-

Facility Management System for Buildings, Edgar Samuel Neely, Jr. and Robert Neathammer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p129-136.

ed., 1972), p129-130.
Feasibility of Water Supply for City of Houston Subsidence Zones Five and Six, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, Water Resource-Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p480-485.

Landfills: Anatomy of Automated Design, J. and David B. Porter, CE Mar. 92, p52-55. Juan C. Vargas

and David B. Porter, v. E. mar. 74, justices in Highway Corridor Studies, David D. Metcalf and Mark R. Urban, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p174-181.

Lunar Mining—Surface vs. in Situ—A Comparative Study, Paulo Roberto Pereira, Russell J. Miller and Gary S. Brierley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 195-1208.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, Mark P. Nathan, Frank Barnes, Hon-Yim Ko and Stein Sture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-457.

Nitrate Risk Management under Uncertainty, Yong W. Lee, Mohamed F. Dahab and Istvan Bogardi, WR Mar/Apr. 92, p151-165.

Pricing Armor Rock for Rubble Mound Breakwaters, R. A. Everist, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p160-169.

Pricing of Services, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1089-1094.

Problems and Potential of Irrigated Agriculture in Sub-Saharan Africa, Mahmood Alam, IR Mar./Apr. 91, p155-172.

Procedures for Evaluating Aggregate Gradation Specifica-tions, Edwin C. Novak, Ir., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p261-274.

Recycle, Yes; Pay for It, Maybe, CE Nov. 92, p10.

Risk Based Optimal Fatigue Testing, J. D. Sørensen, M. H. Faber and I. B. Kroon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., Structural and G 1992), p523-526.

Risk-Costs for Scour at Unknown Bridge Foundations, G. Kenneth Young, Stuart M. Stein and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111.
Small Utility GIS, Didier Goubert and Robert Newton, CE Nov. 92, p69-71.
Successful High Traffic Chip Seal Construction, Scott Shuler, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p186-205.

-205

p186-205.
Sylvan Beach Pier Rehabilitation Study, Peter W. Soltys,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p646-662.
Throughput Study for the Civilian Radioactive Waste
Management System, Peter Gottlieb, William Bailey,
III., Flora Emami, Lawrence M. Ford and John F.
King, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p1349-1358.
Towards a Snacefaring Civilization, Gordon R. Wood-

Committee, 1992), p1349-1358.

Towards a Spacefaring Civilization, Gordon R. Woodcock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2008-2022.

True Costs, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1095-1100.

True Costs of Underground Construction Assessed at No-Dig '92, CE June '92, p12.

Value Engineering at a Superfund Site, Virendra Singh and Amy Monti, CE Mar. 92, p60-63.

West Point Temporary Construction Dock, Chris Sundberg and Jerry Stubbs, (Ports '92, David Torseth, ed., 1992), p723-736.

Cotton
Relating Crop-Yield Response to Water-Table Fluctuations, H. M. Kandil and L. S. Willardson, IR Jan./Feb.
92, p113-121.

Coupled walls

Finite Element Model for Seismic RC Coupled Walls

Having Slender Coupling Beams, Omar Chaallal, ST
Oct. 92, p2936-2943.

Court decisions
Abandoned Contract Can Prompt Liquidated Damages,

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Accepted but Unapproved Bid Yields No Guarantee, CE May 92, p28. Arbitration Doesn't Conflict with Courts, CE Nov. 92,

Can Design Professionals Be Made Responsible for Safe-ty?, CE Nov. 92, p38. Comprehensive Liability Doesn't Cover the Product, CE

June 92, p31.

June 92, p.31.

Conjunctive Use—Advantages, Constraints, and Examples, Jack J. Coe, IR May/June 90, p427-443.

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Contractor Can't Be Held Responsible for Delays, CE Sept. 92, p.32.

Contractor Must Outline All Charges in Contract, CE

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Contractor Not Liable for Sub's Shoddy Work, CE Sept. 92, p32. Contractors Not Liable for Employee Drinking, CE Apr.

ounty Defines Minority Program Too Broadly, CE Feb. 92, p28.

Court Broadens Implied Warranty Definition, CE Oct. 92, p28. Court Claims Wyoming City Prefers Too Much, CE May

92, p28.

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Jan. 92, p27. Courts Set Aside Jury Verdict in FTR Plywood Case, Mi-chael C. Loulakis and William L. Cregger, CE May 92,

p40,42.

Developers to Pay into Fund for Worker's Housing, CE Feb. 92, p28. Employer Liability for Job-Site Injuries, Michael C. Loulakis and William L. Cregger, CE Apr. 92, p37. Engineering Firm Not Liable for Contractor, CE Mar. 92,

Engineers Not Required to Accept the CE Oct. 92, p28.
General Liability Doesn't Cover Poor Workmanship, CE General Liability Doesn't Cover Poor Workmanship, CE Nov. 92.

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p30.
In Too Deep, Robert A. Rubin and Jeannette L. Molina, CE Dec. 92, p67-69.
Indemnification Clarification, CE Aug. 92, p22.
Jury Verdict: Frequency versus Risk-Based Culvert Design, Gary L. Lewis, WR Mar/Apr. 92, p166-184.
Malice Defines Defamation, CE July 92, p30.
Mechanic's Lien Law Applies to Off-Site Work, CE Oct. 92, p28.
Monitored Construction Protects Contractor, CE Feb. 92, p28.

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No indeminity Available from Finite Party, CE July 92, p30.

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root of Lost Profit Requires Cost-Plus Provision, CE Nov. 92, p.30. Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

779.
Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.
Risk Reduction Through Indemnification Contract Clauses, Peyton E. Hutchens, ME July 92, p267-277.
Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.
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State's Indemnity Laws Unenforceable, CE Jan. 92, p27.
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To Specialize, Engineers musi Sessian 92, p30.
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Wage Requirement Stifles Competition, CE Jan. 92, p27.
Work-Site Safety is a Contractual Issue, CE Aug. 92, p22.

COVARIANCE
Nonstationary Response Characteristics of Linear MDOF
Systems, K. Papadimitriou and J. L. Beck, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p572-575.
Pre-Envelope Covariance Differential Equations, G.
Muscolino, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p180-

Coverings
Better Cover-Ups, Robert M. Koerner and David E. Daniel, CE May 92, p55-57.
Designers Cover Tricky Treatment-Plant Site, CE Mar. 92, p12,14.
Landfill-Cover Conflict, Teresa Austin, CE Dec. 92, p70-

A Rule-Based System for Evaluating Final Covers for Hazardous Waste Landfills, Lewis A. Rossman and James T. Decker, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p161-175.

Water Content-Density Criteria for Compacted Soil Liners, David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830.

Crack initiation racking and Debonding on Bimaterial Interface under Uniform Loading, Mikiya Okumura, Norio Hasebe and Takuji Nakamura, EM June 92, p1113-1128.

and Takuji Namanusa, Crack propagation
Computational Framework for 3D Nonlinear Discrete Crack Analysis, V. E. Saouma, R. W. Reich and J. Cervenka, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p788-791.
Damage Mechanics Modeling of the Cyclic Behavior of Plain Concrete, S. Yazdani, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p377-380.

Discrete Markov Process Approach to Fatigue Crack Growth, T. J. Enneking and B. F. Spencer, Jr., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p792-195.

Niedzwecki, ed., 1992), p792-793.
Dugdale Model Applied to Crack Interactions, K. Shah,
H. Stolarski and J. F. Labuz, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p498-501.

1992, p498-501.
Estimating Damage and its Influence on Fracture Toughness, J. F. Labuz, L. Biolzi and C. N. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p523-526.
FEM Modeling of Fictitious Crack Propagation in Concrete, Walter H. Gerstle and Ming Xie, EM Feb. 92,

FEM MUNICIPAL Gerstle and Compared to p416-434.

Fiber Suppressed Localization in Tension, B. Mobasher and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-2718.

Fatigue Cracks, P. Friis-

Inspection Planning for Surface Fatigue Cracks, P. Friis-Hansen and H. O. Madsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p312-315.

ed., 1992), p312-315.
Low-Cycle Fatigue Prediction for Ramberg-Osgood Type Materials, Faisal H. Al-Sugair, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p432-435.
A New Probabilistic Model for the Fracture Toughness of Concrete, M. A. Issa, M. Gorelik and A. M. Hammad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p467-470.
Numerical Analysis of Discrete Nordinear Fracture Me.

Cal Returnity, 1. R. Lan, Co., 1772, Proceedings of the Changes, Walter H. Gerstle and Ming Xie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p784-787.

Probability of Crack Growth in Poisson Field of Penny Cracks, S. Mesarovic, D. Gasparini, S. Muju and M. McNelis, EM May 92, p961-978.

Cracks, S. Mesarovic, D. Gasparini, S. Muju and M. McNelis, EM May 92, p961-978.

Residual Stress Mitigation Considerations for Waste Package Design and Closure, E. S. Robitz, Jr. and T. W. Doering, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p377-384.

Some Remarks on BK-Models for Fatigue Crack Growth, M. M. Rocha and G. I. Schueller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p316-319.

Stability Theory of Cohesive Crack Model, Yuan N. Li and Robert Y. Liang, EM Mar. 92, p387-603.

A Stochastic Approach to the Fatigue Reliability, Yuan Jie Lua, Wing Kam Liu and Ted Belytschko, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p324-327.

A Stochastic Model for Crack Initiation and Fatigue Life, Michael R. Emptage and Bevil J. Shaw, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p308-311.

Stochastic Modeling of Fatigue Crack Growth with Retardation, Dhirendra Verma, Dario A. Gasparini and Fred Moses, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p433-436.

Cracking

Cracking

Alkali-Silica Reactivity: An Overview of a Concrete

Durabity Problem, D. Stephen Lane, (Materials: Performance and Prevention of Deficiencies and Failures,

Thomas D. White, ed., 1992), p231-244.

Analysis of Delamination of Post-Tensioned Silos, Judith

J. Stalnaker and Mark D. Fugler, ST Apr. 92, p1014-

1022.
Automated Identification of Compression-Induced Cracking in Cement Paste, David Darwin, Kirk W. Ketcham, Francisco A. Romero and Jeffrey L. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497.
Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p272-290.

p272-290.

Behaviour of Prestressed Concrete End Blocks, T. J. Ibell and C. J. Burgoyne, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p135-

Bond Anchorage of Pretensioned FRP Tendon at Force Release, Antonio Nanni, Masaharu Tanigaki and Koi-chi Hasuo, ST Oct. 92, p2837-2854.

Corrosion Cracking in Relation to Bar Diameter, Cover, and Concrete Quality, Rasheeduzzafar, S. S. Al-Saadoun and A. S. Al-Gahtani, MT Nov. 92, p327-342. Cracking Response of RC Members Subjected to Uniaxial Tension, Gaetano Russo and Filippo Romano, ST May 92, p1172-1190.

May 92, p1172-1190.
Damage Dependent Micromechanics in Metal Matrix Composites, R. H. Jones, D. H. Allen and J. G. Boyd, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p99-102.
Determination of In-Situ Stresses From Acoustic Emissions, A. K. Maji, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p405-

Drying and Cracking Effects in Box-Girder Bridge Seg-ment, Zdenek P. Bažant, Vladimír Křistek and Jan L. Vítek, ST Jan. 92, p305-321.

Vítek, ST Jan. 92, p305-321.

Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p120-203.

Evaluating Polymer Concrete Bridge Expansion Joints Using Acoustic Emission, M. J. Woodard and S. S. Kuo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p409-412.

FEM Modeling of Fictitious Crack Propagation in Concrete, Walter H. Gerstle and Ming Xie, EM Feb. 92, p416-434.

Investigation of Concrete at a Middle East Plant, Jerome P. O'Connor, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p505-518.

1992, p303-518.
Nonlienar, Incremental Analysis of Olmsted Locks, Chris A. Merrill and Sharon B. Garner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p921-928.
Performance Maller Case Study in Kuwait

Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p77-90.

Performance of Upper Stillwater Dam, Alan T. Richardson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p148-161.

sen, ed. and Francis G. McLean, ed., 1992), p148-161.
Quantitative Stereology of Concrete Microcracking, Kim
D. Basham, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p123-126.
Rehabilitation of Cocnrete Dams: Laboratory Simulation
of Cracking and Injectability, G. Ballivy, K. Saleh, T.
Mnif, J. Maniez, L. M. Landry and M. Nadeau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p614-625.
Softenine Models for Concrete Stability and University

50flening Models for Concrete: Stability and Uniqueness, Donald R. Curran, James K. Gran, Lynn Seaman and Tarabay H. Antoun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p369-

Sonic NDE of Structural Concrete, Larry D. Olson, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992),

Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-

Steady-State and Multiple Cracking of Short Random Fiber Composites, Victor C. Li and Christopher K. Y. Leung, EM Nov. 92, p2246-2264.

Thermal Analysis for RCC—A Practical Approach, Stephen Tatro and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p389-406.

McLean, ed., 1992), p389-406.
Thermal-Structural Analysis Methods for RCC Dams, P. R. Barrett, H. Foadian, R. J. James and Y. R. Rashid, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p607-420.
Threatened Levees on Sherman Island, Roger Foott, Richard Sisson and Roy Bell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p756-774.
Two-Dimensional Statistical Micromechanical Models for Microcracked Brittle Solids, K. H. Tseng and J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p361-364.
Yield Safety, Cracking Control, and Moment Redistribution, M. Z. Cohn and Paolo Riva, ST Feb. 92, p447-468.

Cracks

Application of Fracture Mechanics Methodology to Assessment of Weld Defects in Offshore Platforms, T. M. Hsu, E. W. Carter, S. L. Fu and J. S. Mitchell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p733-749.

Automated Identification of Compression-Induced Cracking in Cement Paste, David Darwin, Kirk W. Ketcham, Francisco A. Romero and Jeffrey L. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497.
Concrete Beam Testing with Optical Fiber Sensors, D. Huston, P. Fuhr, P. Kajenski and D. Snyder, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p60-69.
Crack Analysis of Reinforced Concrete Tension Members, H. C. Chan, Y. K. Cheung and Y. P. Huang, ST Aug. 92, p2118-2132.
Crack Band Based Model for FEM Analysis of Concrete Structures, Grzegorz Gajer and Peter F. Dux, ST June 90, p1696-1714.

90, p1696-1714.
Crack Filling Goes Mobile, CE Apr. 92, p17-18.
Damage Assessment in Concrete Using Acoustic Emission, C. Ouyang, E. Landis and S. P. Shah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p13-24.
Damage Mechanics Modeling of the Cyclic Behavior of Plain Concrete, S. Yazdani, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p377-380.
Detection of Cracks in Painformed.

1992), p377-380.
Detection of Cracks in Reinforced Concrete Cans, Christian Grosse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p413-416.
Dynamic Stiffness Analysis of Concrete Pavement Slabs, N. McCavitt, M. R. Yates and M. C. Forde, TE July' Aug. 92, p540-556.
Effect of Micro-parameters on the Macroscopic Behaviour of Ductile Fiber Reinforced Brittle Matrix Composites, Christopher K. Y. Leung and Jeffrey Chi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p744-747.
Experimental Photoleastic Analysis of Tunnels Contain-

Experimental Photoleastic Analysis of Tunnels Containing Cracks, Adel Y. Akl, S. S. Abdel Salam, M. H. El Haddad and Gouda A. Mohamed, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p276-279.

ed., 1992), p276-279.
Failure Analysis of Masonry Structures, P. B. Shing, H. R. Lotfi, A. Barzegarmehrabi and J. Brunner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p780-783.
Flexural Analysis of Reinforced Concrete Beams Containing Steel Fibers, Byung Hwan Oh, ST Oct. 92, p2821-2836.

Fracture Toughness of DMMC, Richard J. Arsenault, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p228-231.

ms. NIGLEMECKI, ed., 1992), p228-231.
Frequency Spectrum Analysis of Ultrasonic Testing Signal in Concrete, Wei-Du Li, (Nondestructive Testing of Concrete Elements and Structures, Fathad Ansari, ed. and Stein Sture, ed., 1992), p104-114.
Histogram-Based Approach for Automated Pavement-Crack Sensing, K. R. Kirschke and S. A. Velinsky, TE Sept./Oct. 92, p700-710.

Sept./Oct. 92, p700-710.

Integrity Testing of Concrete Elements Using Surface Waves, B. R. Bowen, J. M. Roesset and K. H. Stokoe, II., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p952-955.

Macromodeling of Complex Composites, P. K. Basu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1071-1074.

Microcrack Interaction Toughening in Ceramics and CMCs, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1016-1019.

Nondestructive Crack Identification by Acoustic Engineering

1992), p1016-1019.

Nondestructive Crack Identification by Acoustic Emission Analysis and Ultrasonic Frequency Response, Massyasu Ohtsu and Yasunori Sakata, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p171-181.

Favement Surface Maintenance: Overview of SHRP H-106 Experimental Installations, Russell Romine, David Peshkin, Kelly Smith and Torm Wilson, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p146-159.

Postcrack Scaling Relations for Fiber Reinforced Cementitious Composites, Victor C. Li, MT Feb. 92, p41-57.

Probability of Crack Growth in Poisson Field of Penny Cracks, S. Mesarovic, D. Gasparini, S. Muju and M. McNelis, EM May 92, p961-978. Quantitative NDE Technique for Assessing Damages in Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM July 92, p1468-1487.

Choy, EM July 92, p1408-1487.
Retrospect and Prospect: Micromechanics, Sia Nemat-Nasser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p632.
Seepage Control in Kaolinite Clay with Simulated Cracks, C. Vipulanandan and M. Leung, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1054-

1066.
Stability of Concrete Gravity Dams with Drained and Finite Cracks, Bernard Amadei and Tissa Illangasekare, EY Dec. 92, p149-163.
Strain-Based Damage Deactivation in Concrete, N. R. Hansen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p486-489.
Study of Three Dimensional Crack Tip Location of Mortar by Acoustic Emission, H. L. Chen and C. T. Cheng, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p25-36.
Theoretical Study of Crack-Induced Eigenfrequency

1992), p.25-36.
Theoretical Study of Crack-Induced Eigenfrequency Changes on Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM Feb. 92, p384-396.
Ultrasonic Wave Scattering by a Crack in a Composite Plate, W. M. Karunasena, A. H. Shah and H. D. Mair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559.

Cranes
Analysis of Space Crane Articulated-Truss Joints, K.
Chauncey Wu and Thomas R. Sutter, (Engineering,
Construction, and Operations in Space III, Willy 2,
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p320-331.
Chiles and Cranes for a Flexible Lung. Transportation

1992), p.320-331.
Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.308-

319.

Crane Raise with Zero Downtime, William L. Casper and Alex Surko, (Ports '92, David Torseth, ed., 1992), p749-756.

Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Ports '92, David Torseth, ed., 1992), p737-748.

Deep Water Container Wharf & Crane Foundation, John E. Gant, (Ports '92, David Torseth, ed., 1992), p238-

247

Z44.
 Modern Crane Control Enhancements, Jeffrey T. Hubbell, Bruce Koch and Dennis McCormick, (Ports '92, David Torseth, ed., 1992), p757-767.
 Planning/Analysis of VPA's Norfolk North Terminal, Thomas Ward, Richard A. Woodman and Bernardo de Castilho, (Ports '92, David Torseth, ed., 1992), p134-

142.
Reinforced Granular Soil for Track Support, G. P. Raymond, M. S. A. Abdel-Baki, R. G. Karpurapu and R. J. Bathurst, (Grouting, Soil Improvement and Gesyntheties, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 104-1115.
Robotic Platform May Change Crane Design, CE Oct. 92,

p13-14.

p13-14.
Tripod Crane Concept for Lunar Surface Construction, Haruyuki Namba and Martin M. Mikulas, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295.
Upgrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alexander Surko, Jr., (Ports '92, David Torseth, ed., 1992), p802-814.

Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389.

## Creativity

Reflection in Problem Solving and Design, C. J. Khisty and L. L. Khisty, El July 92, p234-239.

Creep Airfield Pavement Creep Failure Investigation, John C. Potter, CF Aug. 92, p177-184.

Analysis of Circular RC Columns for Short- and Long-Term Deformations, Mark Andrew Bradford and R. Ian Gilbert, ST Mar. 92, p669-683.

and Gibert, S1 Mar. 32, p669-683.
Analysis of Slope Failure and Remedial Design of an Earth Dam, Michael J. Mann and Robert E. Snow, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p923-939.

Composite Beams with Partial Interaction under Sustained Loads, Mark Andrew Bradford and R. Ian Gilbert, ST July 92, 1871-1883.
Constitutive Model for Ice, H. A. Khoo and T. M. Hrudey, EM Feb. 92, p259-279.

Creep and Creep Rupture of Metallic Composites, D. N. Robinson, W. K. Binienda and M. Miti-Kavuma, EM Aug. 92, p1646-1660.

Creep Behavior Model for Structural Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Aug. Fridley, R. C. 7 92, p2261-2277.

Creep Effects in Composite Beams with Flexible Shear Connectors, Angelo Marcello Tarantino and Luigino Dezi, ST Aug. 92, p2063-2081.

Dezi, ST Aug. 92, p2063-2081.

Creep Recovery of Prepacked Aggregate Concrete, Abu S. M. Abdul Awal, MT Aug. 92, p320-325.

Densification/Creep Behavior of Experimental Glass-Ceramic Waste Forms for Immobilization of High-Level Calcined Waste at the Idaho Chemical Processing Plant, Krishna Vinjamuri, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p300-303.

Design of Piles in Perpatent Lichte Combined for

Design of Piles in Permafrost Under Combined Lateral and Axial Load, A. Foriero and B. Ladanyi, CR Sept. 91, p89-105.

Drying and Cracking Effects in Box-Girder Bridge Seg-ment, Zdeněk P. Bažant, Vladimír Křístek and Jan L. Vítek, ST Jan. 92, p305-321.

The Effective Stress Path for Soil at High Pressure, Jerry A. Yamamuro and Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p729-732.

ed., 1992), p729-732.

Engineering Properties of Acrylate Polymer Grout, Raymond J. Krizek, Dominique F. Michel, Maan Helal and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724.

Finite Element Simulation of Behavior of Laterally Loaded Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Generalized Creep and Stress Relaxation Model for Clays, Ronaldo I. Borja, GT Nov. 92, p1765-1786. Geosynthetic Strength—Ultimate and Serviceability Limit State Design, R. J. Fannin and S. Hermann, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, p.1411-1426.

Homogeneous Structures Subjected to Repeated Structur-al System Changes, Luigino Dezi, Giovanni Menditto and Angelo Marcello Tarantino, EM Aug. 90, p1723-

Laboratory Testing of Mechanical Rock Bolts, Koon Meng Chua, Jerry Lovato and Roy Cook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Niedzwecki, ed., 1992, pi03-1036.

Mechanism of a Landslide Caused by Rainfall, Masami Fukuoka, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p342-357.

Necking of Creep-Cavitating Bars, C. H. Lu and A. J. Levy, EM Apr. 92, p746-762.

Numerical Integration of Transient Creep Constitutive Equations for Polycrystalline Ice, S. Shyam Sunder, Alex A. Elvin and S. Nanthikesan, (Engineering Me-chanics, Loren D. Lattes, ed. and John M. Niedzwecki, chanics, Loren D. Lui ed., 1992), p429-432.

Plastic Waste for Low-Weight Embankments, H. El Ghoche, C. Coulet and D. Daudon, (*Grouting, Soil Im-*provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1368-

Prestress Level in Stress-Laminated Timber Bridges, Ed-ward F. Sarisley and Michael L. Accorsi, ST Nov. 90, p3003-3019.

Reliability Analysis of Creep and Shrinkage Effects, C. Q. Li and R. E. Melchers, ST Sept. 92, p2323-2337.

Serviceability Analysis of Wood Beams with Creep, David V. Rosowsky, Kenneth J. Fridley and Timothy A. Philpot, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90. Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsam, (Nondestructive Testing of Concrete Ele-ments and Structures, Farthad Ansari, ed. and Stein Sture, ed., 1992), p215-225. Temperature-Independent Relationships for Frozen Soils.

Sture, ed., 1992.), p213-223.

Temperature-Independent Relationships for Frozen Soils,
H. Wijeweera and R. C. Joshi, CR Mar. 92, p1-21.

Time-Dependent Analysis of Composite Steel-Concrete
Sections, R. Ian Gilbert, ST Nov. 89, p2687-2705.

Critical flow Critical Depth Relations for Flow Measurement Design, A. J. Clemmens and M. G. Bos, IR July/Aug. 92, p640-644.

november 1988 and Layer, Chiu-on Ng Roll-Waves on a Non-Newtonian Mud Layer, Chiu-on Ng and Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p892-

895.
Critical Buckling Load Statistics of an Uncertain Column, Garrett D. Jeong, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p563-566.
Elastic Buckling of Incomplete Composite Plates, Koichi
Sato, EM Jan. 92, p1-19.
Theoretical Study of Stability Criteria for X-Bracing Systems, Dong Q. Wang and Arthur P. Boresi, EM July 92,
p137-1364.

Critical path method
Design Management and Stress Analysis of a Circular
Rock Tunnel and Emplacement Holes for Storage of
Spent Nuclear Fuel, Nadia Kandulah-Ladkany and
Richard V. Wyman, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p2260-2266.

ment Program Committee, 1992), p2260-2266.
Crop production
Decision Support System for Crop Planning during
Droughts, H. Raman, S. Mohan and N. C. V. Rangacharya, IR Mar/Apr, 92, p229-241.
Economical and Statistical Based On-Farm Irrigation
Scheduling, L. Niel Allen, (Irrigation and Drainages
Saving a Threatened Resource—In Search of Solutions;
Ted Engman, ed., 1992), p146-151.
Irrigation and Drainage—Systems Policy Analysis and
India Case Study, Mahesh C. Chaturvedi, WR July/
Aug. 92, p445-464.
Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monsoon
Climate of Tamil Nadu, India, Charles Rodgers and
Mark Svendsen, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347.

Crop response
Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monsoon
Climate of Tamil Nadu, India, Charles Rodgers and
Mark Svendsen, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347.

man, ed., 1992), p347.
Optimizing Economic Returns in Drainage Design, Larry D. Geobring, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p26-31.
Water Quality Effects on Eucalyptus ET, Allen Dong, Kenneth Tanji, Steve Grattan, Fawzi Karajeh and Marc Parlange, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p164-170.

Crop yield
Applications of Remote Sensing to Irrigated Agriculture,
Christopher M. U. Neale and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource—
In Search of Solutions, Ted Engman, ed., 1992), p541-

346. High Frequency Basin Irrigation Design for Upland Crops in Rice Lands, George J. Moridis and Manuel Alagcan, IR July/Aug. 92, p564-583. Irrigation Timing for Wheat Based on Climate, Crop, and Soil Data, R. P. Tripathi, IR May/June 92, p370-381. Recycling Wastewater by Drip Irrigation, Win Bui, (Irrigation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p437-441

Relating Crop-Yield Response to Water-Table Fluctua-tions, H. M. Kandil and L. S. Willardson, IR Jan./Feb. 92, p113-121.

24, p. 11.7-121.
Simulating the Effects of Deficit Irrigation for Furrow Systems, J. M. Enciso, D. L. Martin, D. E. Eisenhauer and N. L. Klocke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p.244-249.

Crops
2-D Evaporation and Root Extraction in an FEM, Richard G. Allen and Wigdan I. Ahmad, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eagnam, ed., 1992), p189-196.

Seuren of Southons, Ted Legman, ed., 1922, p.163-1196. Applications of Remote Sensing to Irrigated Agriculture, Christopher M. U. Neale and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p541-

eginning of Motion for Selected Unanchored Residue Materials, John E. Gilley and Eugene R. Kottwitz, IR July/Aug. 92, p619-630.

Crop Classification and Area Estimation Using Airborne Multispectral Video/Radiometer Remote Sensing, Rashid H. Ahmed and Christopher M. U. Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p323-

Darcy-Weisbach Roughness Coefficients for Selected Residue Materials, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p481-486.

Engman, ed., 1992), peat-480. Decision Support System for Crop Planning during Droughts, H. Raman, S. Mohan and N. C. V. Ranga-charya, IR Mar./Apr. 92, p229-241. Design Optimization of Passively Cooled Room, Sydney C. K. Chu and Piyawat Boon-Long, EY Apr. 92, p18-

37.

ETBC: Interactive Software for Blaney-Criddle Estimates of Evapotranspiration, Ronald L. Elliott, Eldon L. Johns and Paul A. Weghorns, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p134-139.

Irrigation Land Management Model, Roy A. Steiner and Andrew A. Keller, IR Nov./Dec. 92, p928-942.

Irrigation Timing for Wheat Based on Climate, Crop, and Soil Data, R. P. Tripathi, IR May/June 92, p370-381.

Planning Simulation Model of Irrigation District, Jesus Chávez-Morales, Miguel A. Mariño and Eduardo A. Holzapfel, IR Jan./Feb. 92, p74-87.

Predicting Water Demand in Agricultural Regions Using

Holzapfel, IR Jan./Feb. 92, p74-87.

Predicting Water Demand in Agricultural Regions Using Time Series Forecasts of Reference Crop Evapotranspiration, John C. Tracy, Miguel A. Mariño and S. Alireza Taghavi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p50-55.

Simulated Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Prigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p177-182.

Stochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/Aug. 92, p527-542.

Aug. 92, p527-542.

Cross section

Cross Sections
Complete Biaxial Load-Deformation Behavior of RC Columns, Gang Gary Wang and Cheng-Tzu Thomas Hsu,
ST Sept. 92, p2590-2609.

Estimating Earthwork Volumes of Curved Roadways: Mathematical Model, Said M. Easa, TE Nov./Dec. 92, p834-849

Crossnow
Energy Loss at Combining Pipe Junction, Marc Serre, A. Jacob Odgaard and Rex A. Elder, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p766-771.

ed., 1992), p766-771.

Observations on Flow Around Bridge Piers, Ferdous Ahmed and Nallamuthu Rajaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p834-839.

Turbulence, and Energy Loss, at Combining Pipe Junctions, Marc Serre and A. Jacob Odgaard, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p389-392.

Crossings
Computer Simulation of River Channel Changes at a
Bridge Crossing on a Point Bar, Howard H. Chang,
Marshall E. Jennings and Steve Otona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p76-81.

United States Geological Survey Bridge Scour Evaluation Program in Texas, David D. Dunn and Henry R. Hejl, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p82-84.

Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p292-295.

Applying the ARMOS and MOFAT Models to a Major Oil Spill, Otto J. Helweg, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p585-590.

Crushing

Crushing Response of Energy Absorbing Composite Structure, Gary L. Farley, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p876-879.

1792, p8 76-8-79.
Drag Coefficient and Fall Velocity of Nonspherical Particles, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY May 91, p660-667.
Pressure of Crushed Ice as Mohr-Coulomb Material Against Flat, Axisymmetric Indentor, Dat Duthinh, CR Dec. 92, p139-151.

Crystal growth

On the Bifurcation of Elasto-Plastic Crystals During Multiple Slip, Ronaldo I. Borja and Jon R. Wren, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p284-287.

Crystallization and Crystallization Characteristics of

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, S. L. Marra, R. E. Ed-wards and C. M. Jantzen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924.

Cuiverts

Analytical Hydraulic Modeling of Road Culverts, Rohin S. Saleh and Ralph Hwang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p798-803.

p798-803.

HEC-2 Water Surface Profiles Program, Vernon Bonner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), p866-871.

Jury Verdict: Frequency versus Risk-Based Culvert Design, Gary L. Lewis, WR Mar/Apr. 92, p166-184.

Local Scour Downstream of Box-Culvert Outlets, H. Abida and R. D. Townsend, IR May/June 91, p425-440.

Predicting the Performance Limits of Soil-Culvert Systems, Yahia E. -A. Mohamedzein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911.

Structural Evaluation of Box Culverts, Shad M. Sargand.

Structural Evaluation of Box Culverts, Shad M. Sargand, Glenn A. Hazen and John O. Hurd, ST Dec. 92, p3297-3314.

Curing

Chloride Binding Capacity in Cement-Fly-Ash Pastes, O. A. Kayyali and M. Sh. Qasrawi, MT Feb. 92, p16-26.

Concrete Surface Characterization Using Optical Metrology, Nora C. Sassenfeld and Michelle M. Crull, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p206-214.

Effective Cohesion for Compacted Clay, Robert W. Day, GT Apr. 92, p611-619. Evaluation of Compressive Strength for High-Strength Concrete by Pulse Velocity Method, R. Sri Ravindrarajah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p115-126.

Strength and Shrinkage of Natural Pozzolanic Mortar in Hot Weather, Jihad S. Sawan, MT May 92, p153-165.

Currents

A Brief Literature Review of Open-Channel Current Meter Testing, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 9458-463.

Broadside Current Forces on Moored Ships, William N. Seelig, David Kriebel and John Headland, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), 9326-340.

Current Blockage Effects on Model-Scale Offshore Platform, Timothy D. Finnigan, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p294-310.

Diffusion and Dispersion in Coastal Waters, E. John List, Gregory Gartrell and Clinton D. Winnant, HY Oct. 90, p1138-1179.

Diversion Oil Booms in Current, M. Robinson Swift Reserved.

p1158-1179.
Diversion Oil Booms in Current, M. Robinson Swift, Barbaros Celikkol, Gilles LeCompagnon and Chris E. Goodwin, WW Nov./Dec. 92, p587-598.
Effect of Static Offset on TLP Modeling, C. Oran, EM Jan. 92, p74-91.
Field Verification of a Wave-Induced Current Model, Jane McKee Smith, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p95-104.

A Finite Element Model for Three-Dimensional Flows.

Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p95-104.

A Finite Element Model for Three-Dimensional Flows Along the West Coast of Vancouver Island, M. G. G. Foreman, R. E. Thomson, D. R. Lynch and R. A. Walters, Estsuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992, p174-58.

A Fourier Series Solution to Bottom Roughness Induced Stresses During Pipe Laying, Naum Kershenbaum, J. T. Powers and Donald Chang, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p1006-1035.

Hydrodynamic Forces and Evolution of a Nearshore Berm at South Pader Elsand, Texas, James A. Aidala, Neil T. McLellan and Cheryl E. Burke, (Hydraulic Engineering, Sawing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239.

Sontitions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl234-l239. The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, Boris Galperin, Alan F. Blumberg and Robert H. Weisberg, Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p332-343. Laboratory Study of Oil Slick Subjected to Nearshore Circulation, A. G. L. Borthwick and S. A. Joynes, EE Nov./Dec. 92, p905-922.
Modeling Nearshore Currents in the Vicinity of the Endicott Causeway, Alaska, Peter Hamilton, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p227-239.
A Predictive Model of the Currents in Cleveland Bay, Brian King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p746-758.
Specifying the Offshore Environment, George Z. Forri-

p. 190-173.

Specifying the Offshore Environment, George Z. Forristall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), pl. 41.

State of the Art in Other Ocean Energy Sources, Richard J. Seymour and Preston Lowrey, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p.258-273.

Static Wave Force Procedure for Platform Design, John C. Heideman and Timothy O. Weaver, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p496-517.

Three-Dimensional Circulation Modeling of the Coastal and Ocean Environments, Keh-Han Wang, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p637-651.

Wave-Current Interaction with a Large Structure, Mi-chael Isaacson and Kwok Fai Cheung, (Civil Engineer-ing in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80.

Curricula
A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

Civil Engineering Capstone Design Course, Donald A. Andersen, El July 92, p279-283.

Civil Engineering Curriculum Computer Integration 1992, Robert M. Henry, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1226-1233.

Composites for Offshore Applications: A Multidisciplinary Education Program for the Marine Industry, Diane S. Kukich, Vistasp M. Karbhari and John W. Gillespie, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p953-967.

Computing in Civil Engineering: Current Trends and Fu-ture Directions, Nelson C. Baker and Glenn J. Rix, El Apr. 92, pl 39-155.

Curriculum for Future Civil Engineers: Practitioner's Viewpoint, Guy E. Jester, El Oct. 89, p357-362.

Delineating Theory for GPS Surveying, Alfred Leick, SU May 92, p33-42.

A Department's Perspective on Computer Education, Rafael G. Quimpo and Joel I. Abrams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p73-80.

Education, Richard G. Luthy, David A. Bella, James R. Hunt, James H. Johnson, Desmond F. Lawler, Charles R. O'Melia and Frederick G. Pohland, El Oct. 92,

p361-380

Guidance for Engineering-Design-Class Lectures on Eth-ics, Richard H. McCuen, El July 90, p251-257.

Integrating the Undergraduate Engineering Curriculum, Alice M. Agogino and Anthony R. Ingraffea, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 935-635.

An Interdisciplinary Approach to Learning and Teaching About Nuclear Waste Management, Roberta A. Scull, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1807-1812.

military Leaders and Civil Engineers—An Air Force Academy Challenge, J. L. Brickell, K. J. Knox, B. L. Miller and B. D. Bryant, El July 92, p240-249. Need for "Professional" Education for Professional Engi-neers, T. E. Fenske and S. M. Fenske, El Oct. 90, 236, 236

NSF Coalitions Hope to Revolutionize Education, CE June 92, p24,27.

An Ocean Engineering Program for the 21st Century, L. S. Fletcher and J. E. Flipse, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p370-380.

Space Civil Engineering Option—A Progress Report, Marvin E. Criswell and Willy Z. Sadeh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2136-2146.

The Use of Computers as an Aid to Modular Learning in Civil Engineering, Richard N. Palmer and Gregory R. Miller, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p364-367.

ed. and Jeff R. Wright, ed., 1992), p364-367.

Use of Multimedia in a Sophomore Design Course, Mark
L. Valenzuela, Gregory G. Deierlein and Richard N.
White, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno,
ed. and Jeff R. Wright, ed., 1992), p229-236.

Why Four Years? Howard I. Epstein, El Apr. 91, p150154.

The Crown and the Curtain Wall, Dudley G. McFar-quhar, CE Aug. 92, p62-65.

Anchors in the Desert, Donald A. Bruce, William Fiedler and Ronald Triplett, CE Dec. 91, p40-43. Buckling of Suspended Cambered Girders, Walter L. Peart, Edward J. Rhomberg and Ray W. James, ST Feb. 92, p505-528.

Deflections of Beams with Varying Rectangular Cross Section, Filippo Romano and Gaetano Zingone, EM Oct. 92, p2128-2134.

Estimating Earthwork Volumes of Curved Roadways: Mathematical Model, Said M. Easa, TE Nov./Dec. 92,

Moving Hinge in Large-Displacement Problems, F. Lu and A. N. Sherbourne, EM Sept. 92, p1840-1849.

Solving Circular Curve Using Newton-Raphson's Method, Chun-Sung Chen and Lih-Shinn Hwang, SU Feb. 92, p24-32.

Curve fitting

130

A Frequency Surface for Rainfall Intensity and Duration, G. V. Loganathan and M. A. Parkin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p386-390.

Natamouz, ed., 1992), p386-390.
Sediment Rating Curves Based on Ranked Values, Wolfgang Summer and Jean-Pierre Villeneuve, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p683-688.

Carved beams

Finite Element Analysis of Thin-Walled Curved Beams
Made of Composites, G. S. Palani and Sundaramoorthy Rajasekaran, ST Aug. 92, p.2039-2062.

Fixed-End Moments and Thrusts of Planar Curved Beams, Tung-Ming Wang and Theodore F. Merrill, ST Jan. 92, p.324-331.

Low-Order Interpolation Functions for Curved Beams, S. J. Pan'azopoulou, EM Feb. 92, p329-350.

Curved profiles

Effect of Thickness Distribution on Performance of SCambered Profiles, Baby Chacko, V. Balabaskaran, E.
G. Tulapurkara and P. A. Aswathanarayana, EY Dec.
92, p164-179.

Cutoffs

An Evaluation Study of Modified Mohr-Coulomb and Cap Models, Hamdan N. Al-Ghamedy and Sahel N. Abduljauwad, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p717-

Cyclic loads

Cyclic loads
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. I: Theory, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p229-245.
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. II: Verification, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p246-265.

Fenggang Ma, GT Feb. 92, p246-265.
Associative Plasticity for Dilatant Soils, Panos D. Kiousis and Ali A. Abdulla, EM Apr. 92, p763-785.
Collapse Mode of Elastic-Plastic Structures, F. Giambanco, T. Panzeca and M. Zito, EM June 92, p1083-1092.
Cyclic Behavior of a Deepwater Normally Consolidated Clay, Rathindra N. Dutt, Earl H. Doyle and Richard S. Ladd, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p546-559.
Cyclic Behavior of End-Plate Moment Connections, Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2017-293.

Cyclic Behavior of Extended End-Plate Joints, Ahmed Ghobarah, Robert M. Korol and Ashraf Osman, ST May 92, p1333-1353. Density Changes During Undrained Loading— Membrane Compliance, Mark D. Evans, GT Dec. 92,

Effect of Soil Plasticity on Cyclic Response, Mladen Vucetic and Ricardo Dobry, GT Jan. 91, p89-107. Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultrud-ed Fiber-Reinforced Plastics Beams in Industrial Build-ed Fiber-Reinforced Plastics Plastics ing Construction, Ethan A. Love and Tanongsak Bisarnsin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584.

1992), p577-584.
Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, N. Navayogarajah, C. S. Desai and P. D. Kiousis, EM May 92, p990-1011.
Hysteretic Response of Reinforced-Concrete Infilled Frames, Sinan Altin, Ugur Ersoy and Tugrul Tankut, ST Aug. 92, p2133-2150.
Incremental Collapse of Structures with Constant Plus Cyclically Varying Loads, Sidney A. Guralnick, Thomas Erber, Osama Soudan and Jixing He, ST June 91, p1815-1833.
Inelastic Response of Variable Stiffness Members under

elastic Response of Variable Stiffness Members under Cyclic Loading, Demeter G. Fertis and Chin T. Lee, EM July 92, p1406-1422.

Locally Buckled Plastic Hinge Behavior Under Monoton-ic and Cyclic Loading Condition, Eun-Taik Lee and G. C. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.

Low-Cycle Fatigue Prediction for Ramberg-Osgood Type Materials, Faisal H. Al-Sugair, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p432-435.

Mechanisms of Strength Loss in Stiff Clays, Timothy D. Stark and J. Michael Duncan, GT Jan. 91, p139-154.

Stark and J. Michael Duncan, GT Jan. 91, p139-134. Micromechanical Model to Predict Sand Densification by Cyclic Straining, Ricardo Dobry and Emmanuel Petrakis, EM Feb. 90, p288-308. Microplane Model for Cyclic Triaxial Behavior of Con-crete, Jolko Ožbolt and Zdeněk P. Bažant, EM July 92,

p1365-1386. pl305-1380. Mixed Hardening, Three-invariants Dependent Cap Model, Sahel N. Abduljauwad, Isa M. Al-Buraim and Hamdan N. Al-Ghamedy, EM Mar. 92, p620-637. Moduli and Damping Factors of Soft Marine Clays,

Hamdan N. Al-Chamedy, EM Mar. 92, p620-637.

Moduli and Damping Factors of Soft Marine Clays,
Takaaki Kagawa, GT Sept. 92, p1360-1375.

Nonlinear Analysis of Strain-Softening Damage under
Monotonic and Cyclic Loading, Zdenek P. Bažant,
Joško Ožbolt and Rolf Eligehausen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,
ed., 1992), p490-493.

Nonlinear Cyclic Behavior of Reinforcing Bars Including
Buckling, Giorgio Monti and Camillo Nuti, ST Dec.
92, p3268-3284.

Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

G1 Jan. 92, p34-30.

Pipeline Storm Behavior on Clay Soils, Derek V. Morris, Tony S. Yen, Wayne A. Dunlap and James R. Hale, Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p560-570.

Predicting Behavior of Cyclically Loaded RC Structures, William K. Rule and Robert E. Rowlands, ST Feb. 92,

Probability Model of Load Exceedances under Cyclic Loadings, Karen C. Chou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p208-211.

Reserve Capacity Design Method (RCDM) for Deepwater Piled Foundations, J. M. E. Audibert, J. L. Mueller and S. R. Bamford, WW Jan/Feb. 92, p32-42.

Residual Strength of Structural Components Subjected to Cyclic Loads, Deric John Oehlers, ST Oct. 92, p2645-2658.

Stability of Beams in Eccentrically Braced Frames, M. D. Engelhardt, K. C. Tsai and E. P. Popov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1043-1046.

Strength of Concrete-Filled Thin-Walled Steel Box Col-umns: Experiment, Hanbin Ge and Tsutomu Usami, ST Nov. 92, p3036-3054.

Cyclic tests
Cyclic Behavior of a Deepwater Normally Consolidated
Clay, Rathindra N. Dutt, Earl H. Doyle and Richard S.
Ladd, (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p546-559.

Buckling of Pressurized Axisymmetrically Imperfect Cyl-inders Under Axial Loads, Jin-Guang Teng and J. Mi-chael Rotter, EM Feb. 92, p229-247.

Energy Dissipation Characteristics of Rubber Cylinders, Dean L. Sicking, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p139-

Experimental Study of the Transient Temperature Distributions in Concrete, Paul C. Hoffman and Stanley K. Ciesielski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p200-203

Nonlinear Behaviour of Schneebeli Packings, Daniel Bideau, Jean-Paul Troadec and Claude Poirier, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p167-170.

Nonlinear Wave Runup on Large Circular Cylinders, David L. Kriebel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p173-187.

The Optimum Gravity Dam, Jerome M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p5-19.

Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Croll Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188-202.

Three-Dimensional Incompressible Flow Calculations with MacCormack's Method, Robert S. Bernard and Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p219-224.

p219-224.

Time-Domain Second-Order Wave Diffraction in Three Domains, Michael Isaacson and Kwok Fai Cheung. WW Sept./Oct. 92, p496-516.

Wave Runup and Forces on Cylinders in Regular and Random Waves, John M. Niedzwecki and Arun S. Duggal, WW Nov./Dec. 92, p615-634.

Wave Slamming on a Horizontal Circular Cylinder, Michael Isaacson and Sundar Prasad, (Civil Engineering in the Occans V, Robert T. Hudspeth, ed., 1992), Wind Effect on Chiling Medical Comments.

p. 100 p. 100

Cylindrical shells

Cylindrical shells

The Analysis Related to the Impact of Composite Panels, Ronald Perry, Anthony Palazotto and Raghbor Sandhu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 286-1296.

An Analytical Solution to a Clamped Cylindrical Panel with Anti-Symmetric Angle-Ply Laminations, Humayun R. H. Kabir and J. B. Kennedy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl 1055-1058.

Cylindrical Fabric-Confined Soil Structures, Richard A. Harrison, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 23-134.

Cylindrical Shell Redesign by Large Admissible Perturbations, Basem Alzahabi and Michael M. Bernitsas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p200-203.

Dynamic Stability of Composite-Material Circular Cylindrical Stability of Composi

Dynamic Stability of Composite-Material Circular Cylindrical Shells with Orthogonal Stiffeners, C. W. Bert, C. D. Kim and V. Birman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p652-655.

Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p912-915.

Prototype Lunar Base Construction Using Indigenous Materials, John Amin Happel, Kaspar Willam and Benson Shing, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 12-122.

Response Variability of Structures Subjected to Bifurca-tion Buckling, G. V. Palassopoulos, EM June 92,

p1164-1183.

p1104-119.3.
Stiffened Sheathings of Orthotropic Cylindrical Shells, P.
Rigo, ST Apr. 92, p926-943.
Wave Propagation in Fluid Loaded Periodic Structures,
Michael L. Accorsi, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p212215.

Czechoslovakia

Czechoslovakian Bridge: A Firsthand Look (ltr), Jarda D. Nehybka, CE July 92, p.36. For CE Researcher, Return to Roots Hold Special Signifi-cance, NE Mar. 92, p5.

A Steel Box Girder Bridge-With a Twist, CE Apr. 92, p16-17

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066.

Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), pl 98-

Concrete-Face Rockfill Dam: I. Assessment (Paper intro-duced by J. Barry Cooke), James L. Sherard and J. Barry Cooke, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p494-511.

Concrete-Face Rockfill Dam: II. Design (Paper intro-duced by J. Barry Cooke), J. Barry Cooke and James L. Sherard, (Embankment Dams—James L. Sherard Con-tributions, Sukhanander Singh, ed., 1992), p512-532. The Construction of New Victoria Dam, Australia, Robert J. Wark, Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992) p632. 1992), p63-82.

Construction of Urugua-I RCC Dam, Juan Buchas and Fotio Buchas, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p238-271.

The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48. Discussion of The Optimum Gravity Dam by J. M. Ra-phael, Raymond E. Davis, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p20-21.

ed., 1992), p20-21.

Economic Factors in Roller Compacted Concrete Dam
Construction, John W. Parker, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G.
McLean, ed., 1992), p227-241.

Final Design and Construction of Gibraltar Dam
Strengthening, Noel C. Wong, Theodore B. Feldsher,
Robert S. Wright and David H. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p440-458.

Lesson Learned from Ell. Creek Dam. Dennis B. Hor-

Lessons Learned from Elk Creek Dam, Dennis R. Hop-man, (Roller Compacted Concrete III, Kenneth D. Han-sen, ed. and Francis G. McLean, ed., 1992), p162-180.

Mixing and Delivery of Roller Compacted Concrete, Robert Oury and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p242-257.

McLean, ed., 1922, p.242-237.
The Optimum Gravity Dam, Jerome M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p5-19.
Performance of Upper Stillwater Dam, Alan T. Richardson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p148-161.

RCC Dam Construction—A Contractor's View, Jeffrey C. Allen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-226

RCC Dam Design Concepts Versus Construction Conditions for Stagecoach Dam, Terrence E. Arnold and Daniel L. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p291-307.

Rockfill Dams: Steel-Faced Dam (Paper introduced by J. Barry Cooke), James L. Sherard, (Embankment Dams:—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), pl-9.

Singi, ed., 1922, pr. 3.

Thermal-Structural Analysis Methods for RCC Dams, P.
R. Barrett, H. Foadian, R. J. James and Y. R. Rashid,
(Roller Compacted Concrete III, Kenneth D. Hansen,
ed. and Francis G. McLean, ed., 1992), p407-422.

Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-

Concrete-Face Rockfill Dam: I. Assessment (Paper intro-duced by J. Barry Cooke), James L. Sherard and J. Barry Cooke, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p494-

Concrete-Face Rockfill Dam: II. Design (Paper intro-duced by J. Barry Cooke), J. Barry Cooke and James L. Sherard, (Embankment Dams—James L. Sherard Con-tributions, Sukhanander Singh, ed., 1992), p512-532.

Concrete-Faced RCC Dams, Ronnie M. Lemons, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), 9308-322.

Dams Going Safely over the Top, R. Lee Wooten, George R. Powledge and Stephen L. Whiteside, CE Jan. 92, p52-34.

Design and Proposed Construction Techniques for Pangue Dam, Brian A. Forbes, Dario Croquevielle B. and Hernan Zabaleta G., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p47-62.

Design of Miel II—A High RCC Dam, Alberto Marulanda, Fabio Amaya and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p83-98.

Design of Pena Colorada Tailings Retention Dam, Donald L. Sexton, James W. Carpenter and Ernest K. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374-388.

Design of the Boney Falls RCC Emergency Spillway, W. J. Marold, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-

Hansen, ed. and Francis G. McLean, ed., 1992), p476-490.

Earthquake Considerations in Earth Dam Design, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p30-54.

Embankment Dams—James L. Sherard Contributions, Geotechnical Special Publication No. 32 (Sherard Memorial Volume), Sukhanander Singh, ed., 1992, 0-87262-897-3, 590pp.

Final Design and Construction of Gibraltar Dam Strengthening, Noel C. Wong, Theodore B. Feldsher, Robert S. Wright and David H. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p440-458.

Landslide-Generated Waves in Reservoirs, C. J. Tang and J. F. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p220-223.

Lessons Learned from Elk Creek Dam, Dennis R. Hopman, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p162-180.

RCC Dam Design Concepts Versus Construction Conditions for Stagecoach Dam, Terrence E. Arnold and Daniel L. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p291-307.

RCC for Rehabilitation of Dams in the USA-An Overview, Kenneth D. Hansen, (Roller Compacted Concrete Concepts Conc

RCC for Rehabilitation of Dams in the USA-An Overview, Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p.22-46.

ed., 1992), p22-46.
Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p99-116.
Roller Compacted Concrete Tailing Retention Dam, Daniel L. Johnson, Nigel A. Skermer and Frank Bergstrom, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p181-197.

Thermal Analysis for RCC—A Practical Approach, Stephen Tatro and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p389-406.

valuating Spillway Adequacy, John K. Hawk, CE May 92, p74-76.

92, p74-76.
Trends and Debatable Aspects in Embankment Dam Engineering (Paper introduced by Edward B. Perry), J. L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p403-410.
Use of Reliability Methods for the Sequential Analysis of a Small Dam, Eric C. Drumm, Richard M. Bennett and William E. Manrod, III., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1126-1136.

and Ross W. Boulanger, ed., 1992), p1126-1136.

Dam foundations
A Geologist's Perspective on Dam Foundation Grouting,
Kenneth D. Weaver, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O. Holtz,
ed. and Ilan Juran, ed., 1992), p639-650.

Potentially Active Faults in Dam Foundations (Paper introduced by Clarence R. Allen), J. L. Sherard, L. S.
Cluff and C. R. Allen, (Embankment Dams—James L.
Sherard Contributions, Sukhanander Singh, ed., 1992),
p204-266.

Dams savey Agricultural Drains and Safety of Dams, James M. Ver-zuh and Gien D. Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p51-56.

Design-Basis Flood for Rehabilitation of Existing Dams, Anand Prakash, HY Feb. 92, p291-305.

Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227.

Landslide-Generated Waves in Reservoirs, C. J. Tang and J. F. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p220-223.

Overtopping Protection Alternatives for Dams, Noel R. Oswall, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1210-1215.

Overtopping Protection Using Roller-Compacted Concrete, Harry E. Jackson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1216-1221.

performance of an Embankment Dam With Partial Cut-off, Pascual H. Perazzo and Tauseef I. Choudry, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1022-1032.

1992), p1022-1032.
Progress on Dam Safety Highlighted at Conference, CE Nov. 92, p21.
Structural and Non-Structural Alternatives for Accommodating Larger Floods at Dams, Louis E. Buck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1228-1233.
Trends and Debatable Aspects in Embankment Dam Engineering (Paper introduced by Edward B. Perry), J. L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p403-410.
Use of Reliability Methods for the Sequential Analysis of a Small Dam, Eric C. Drumm, Richard M. Bennett and William E. Manrod, Ill., (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1126-1136.

Dam stability
Agricultural Drains and Safety of Dams, James M. Verzuh and Glen D. Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p51-56.
Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-213

213. Design of Miel II—A High RCC Dam, Alberto Marulanda, Fabio Amaya and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p83-98. Investigation of Mackay Dam Following the 1983 Borah Peak Earthquake, Leslie F. Harder, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p956-972.

972.

Mechanisms of Strength Loss in Stiff Clays, Timothy D. Stark and J. Michael Duncan, GT Jan. 91, p139-154. Seismic Assessment of Tailings Dams, Thomas G. Harper, Harvey N. McLeod and Michael P. Davies, CE Dec. 92, p64-66.

Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049.

Damage Analysis of Welded Tubular Connections Using Continu-um Damage Mechanics, William F. Cofer and Jihad S. Jubran, ST Mar. 92, p828-845. Cleanup Efforts Continue at Oakland Fire Site, CE Feb. 92, p14.

p1, 1.
 Computational Gradient Plasticity, R. de Borst, H. -B. Mühlhaus and J. Pamin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p776-779.
 Constitutive Model for Ice, H. A. Khoo and T. M. Hrudey, EM Feb. 92, p259-279.
 Contact Induced Damage, Leon M. Keer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p502-505.
 Creep and Creep Rupture of Metallic Composites, D. N. Robinson, W. K. Binienda and M. Miti-Kavuma, EM Aug. 92, p1646-1660.

A Critique of the Ultrasonic Pulse Velocity Method for Testing Concrete, S. Popovics and J. S. Popovics, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p94-103.

A Cumulative Failure Criterion of Concrete Under Uniaxial Dynamic Compressive Loading, Tianxi Tang and Dan G. Zollinger, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p860-

Damage Assessment in Concrete Using Acoustic Emission, C. Ouyang, E. Landis and S. P. Shah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p13-24.

Damage of Concrete in Fatigue, A. Alliche and D. François, EM Nov. 92, p2176-2190.

Damage to Two Apartment Buildings Due to Moisture Variation of Expansive Soil, Robert W. Day, CF Aug. 92, p169-176.

Discrete Markov Process Approach to Fatigue Crack Growth, T. J. Enneking and B. F. Spencer, Jr., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p792-795.

Niedzwecki, ed., 1992), p/92-193. Experimental Determination of the Relation Between the Damaged Zone and the Aggregate Size in Concrete Through Acoustic and Mechanical Techniques, D. Fokwa, Y. Berthaud and D. Breysse, (Engineering Mechanics, Loren D. Luttes, ed. and John M. Niedzwecki, ed., 1992), p131-134.

Geometric Damage Tensor Based on Microplane Model, Ignacio Carol, Zdeněk P. Bažant and Pere C. Prat, EM Oct. 91, p2429-2448.

The Initiation of Bifurcations and Localization in Damaging Materials, M. K. Neilsen and H. L. Schreyer, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p365-368.

Irrigation, Drainage, and Landscaping for Expansive Soil, Robert W. Day, IR Mar./Apr. 92, p285-290.

Laboratory Testing of Ultimate Capacity of Dented Tu-bular Members, Einar Landet and Inge Lotsberg, ST Apr. 92, p1071-1089.

Micromechanical Characterization of Damage-Plasticity in Metal Matrix Composites, George Z. Voyiadjis and Peter I. Kattan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl03-

Microplane Model for Cyclic Triaxial Behavior of Con-crete, Joško Ožbolt and Zdeněk P. Bažant, EM July 92, p1365-1386.

p1365-1386.
Modeling Stiffness Degradation in Filamentary Composite Materials, Robert M. Hackett and Kerry T. Slattery, MT May 92, p196-211.
Neural Network Based Classifiers in Vibrational Signature Analysis, M. F. Elkordy, K. C. Chang and G. C. Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073.
Neural Networks Based Damage Detection in Structures, Zbigniew P. Szewczyk and Prabhat Hajela, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1163-1170.
Notilinear Analysis of Strain-Softening Damage under

Wrigin, etc., 1992, p1105-1170.
Nonlinear Analysis of Strain-Softening Damage under Monotonic and Cyclic Loading, Zdeněk P. Bažant, Joško Ožbolt and Rolf Eligehausen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p490-493.

Numerical and Experimental Studies of Vibration of Impact Damaged SMC Composite Plates, Shive K. Chaturvedi and Pay-Jye Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1063-1066.

Numerical Implementation of Nonlocal Elastoplastic Damage Theory, H. Murakami and H. E. Read, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p248-251.

On the Role of Dispersive Waves in Strain-Softening Media, L. J. Sluys and R. de Borst, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p624-627.

Response of Space Structures Under Sudden Local Damage, Ramesh B. Malla and Baihai Wang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p909-920.

Sandbridge Virginia Oceanfront Seawall Arbitration Hearing: Some Lessons Learned for Coastal Engineers, David R. Basco, Robert A. Dolan and Carter Sinclair, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1003-1020. Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200. Swimming Pools Supported by Dissimilar Bearing Strata, G. S. Kovacs, CF May 92, p118-120.

Damage accumulation
Hygrothermal Effects on Load-Duration Behavior of
Structural Lumber, Kenneth J. Fridley, R. C. Tang,
Lawrence A. Soltis and Chai H. Yoo, ST Apr. 92,
p1023-1038.
A Non-Gaussian Fatigue Model for Offshore Structures,
Jin Wang and Loren D. Lutes, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p463-466.

Damage assessment
Basic Aspects of Damage Mesomodelling, P. Ladeveze
and O. Allis, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p373-376.
Building KBES for Diagnosing PC Pile With Inductive
Learning, Yi-Cherng Yeh, Yau-Hwaug Kuo and D. S.
Hsu, CP Apr. 92, p200-219.
Combined Symbolic-Numeric Explosion Damage Assessment for Structures, Theodor Krauthammer, Raman
Muralidharan and Walter Schmidt, CP Oct. 92, p417434

434

434.

Damage Diagnosis of Steel Frames Using Vibrational Signature Analysis, G. C. Yao, K. C. Chang and G. C. Lee, EM Sept. 92, p1949-1961.

Damage Mechanics Modeling of the Cyclic Behavior of Plain Concrete, S. Yazdani, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p377-380.

Design Criteria for Ferry Landings, Charles T. Jahren, Ralph Jones and Seiichiro Ishii, (Ports '92, David Torseth, ed., 1992), p493-50s.

Effect of Active Control to Structural Reliability, J. T. P. Yao and H. G. Natke, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p373-376.

1992), p373-376.
Evaluating Damage Detection in Bridges, David F. Mazurek, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p944-947.
Flexibility by Multireference Impact Testins for Bridge Diagnostics, Madhwesh Raghavendrachar and Ahmet E. Aktan, ST Aug. 92, p2186-2203.
Impact Craters on Cosmic Dust: Do Damage to the Spacecraft, Hanchang Peng, Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p969-974.

Knowledge Acquisition for Postearthquake Usability De-

Knowledge Acquisition for Postearthquake Usability Decisions, Zahra-El-Hayat Tazir, Tommaso Pagnoni and Carlo Gavarini, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p147-168.
Nondestructive and Destructive Testing of a Three Span Skewed R. C. Slab Bridge, R. A. Miller, A. E. Aktan and B. M. Shahrooz, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p150-161.
On the Modelling of Damage Due to Volumic Variations.

On the Modelling of Damage Due to Volumic Variations in Cementitious Composites, Jacky Mazars and Jean Pierre Bournazel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p482-

485.

483.
Photogrammetric Solution for Vehicle-Damage Investigation, W. Faig, F. R. Wilson, D. King and T. Y. Shih, TE Nov./Dec. 92, p850-865.
Pre-Test Selection of Static Force and Displacement Measurement Locations for Damage Assessment, Masoud Sanayei, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1002). 1992), p567-570.

1992), p567-570.
Quantitative NDE Technique for Assessing Damages in Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM July 92, p1468-1487.
Regularization Methods for Identification of Structural Damage, H. G. Natke and J. T. P. Yao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p676-680.
Remote Sensing Zeros in on River Spill, CE Aug. 92, p20.

Structural Design Methodology of Large Space Struc-tures, Ralph J. Dornsife, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1022-1034.

Estimating Damage and its Influence on Fracture Tough-ness, J. F. Labuz, L. Biolzi and C. N. Chen, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p523-526.

Niedzwecki, ed., 1992), p323-329. Evolution of Damage in Brazilian Test Using Holographic Interferometry, A. Castro-Montero, Z. Jia and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p612-615.

Performance Evaluation of Lake Shelbyville by Stochastic Dynamic Programming, Han-Lin Lee, Jon C. Liebman and E. Downey Brill, Jr., WR Mar./Apr. 92, n183-304. p185-204.

Risk Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, M. A. Cassaro, M. J. Cassaro, R. K. Ragade and S. Alexander, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p29-42.

Damage patterns
Three-Dimensional Fracture Process Zone Detection in Concrete, K. D. Basham, Y. C. Jean and K. P. Chong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p401-404.

Determination of Interfacial Shear and Normal Stresses in Fiber Pull-Out, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1004-1007.

Strain-Based Damage Deactivation in Concrete, N. R. Hansen and H. L. Schrever, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p486-489.

Accepted but Unapproved Bid Yields No Guarantee, CE May 92, p28.

Behavior of Partially Grout-Filled Damaged Tubular Members, S. Parsanejad and P. Gusheh, ST Nov. 92, p3055-3066.

Malice Defines Defamation, CE July 92, p30.

Offending Agency Dictates Damages for Delay Pay, CE Aug. 92, p22.

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State's Laws Protect Public, Not Bidders, CE Apr. 92, p24.

Applications of Viscoelastic Damper to Jointed Struc-tures for Seismic Mitigation, C. S. Tsai and H. H. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p685-688.

Control of Along-Wind Response of Structures by Mass and Liquid Dampers, Y. L. Xu, B. Samali and K. C. S. Kwok, EM Jan. 92, p20-39.

Destabilizing Effect of Magnetic Damping in Plate Strip, Jong S. Lee, EM Jan. 92, p161-173.

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

Effect of Ambient Temperature on Viscoelastically Damped Structure, K. C. Chang, T. T. Soong, S.-T. Oh and M. L. Lai, ST July 92, p1955-1973.

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401.

Frequency Domain Analysis of Undamped Systems, Eduardo Kausel and Jose M. Roësset, EM Apr. 92, p721-734.

Frequency Domain Optimal Control of Wind-Excited Buildings, J. Suhardjo, B. F. Spencer, Jr. and A. Kareem, EM Dec. 92, p2463-2481.

Influence of ADAS Element Parameters on Building Seismic Response, Chuan Xia and Robert D. Hanson, ST July 92, p1903-1918.

Interaction Effects in the Hybrid Control of Euler-Bernoulli Beams, S. T. Pang, T. -C. Tsao and L. A. Bergman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p820-823.

Modal Coupling Effect of Non-Classically Damping, K. Xu and T. Igusa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p453-

Resonant Column Testing of Dynamic Rock Properties, D. V. Morris and J. G. Delphia, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p527-530.

1992), p527-530.
Response of Secondary Systems to Short Duration Stochastic Input, R. Sinha and T. Igusa, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p447-450.
Responses of Bilinear and Impacting Systems Subjected to Regular Waves, Somchai Sumanuskajonkul and Sau-Lon James Hu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p196-199.

Seismic Design of Viscoelastic Dampers for Structural Applications, Ri-Hui Zhang and T. T. Soong, ST May 92, p1375-1392.

92, pl.373-1392.
Seismic-Energy Dissipation in MDOF Structures, Pierre Lèger and Serge Dussault, ST May 92, pl.251-1269.
Soil/Structure Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p396-399.
Stochastic Finite Flernert, Analysis of Dammed Beam on

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), a328, 331. p328-331.

and Geotechnical Reliability, Y. K. Lin, ed., 1992), p328-331.

Structural Characterization of an Articulated-Truss Joint, Thomas R. Sutter, K. Chauncey Wu, Kevin T. Riutort, Joseph B. Laufer and James E. Phelps, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p296-307.

Structural Design Methodology of Large Space Structures, Ralph J. Dornsife, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Structural Seismic Damper, Manuel Aguirre and A. Roberto Sánchez, ST May 92, p118-1171.

Torsional Radiation Damping of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, p1186-1199.

Tuned Liquid Damper (TLD) for Suppressing Horizontal Motion of Structures, Yozo Fujino, Limin Sun, Benito M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p2017-2030.

2030.

Vibration Control of Beams with Embedded Smart Com-posite Material, M. Arockiasamy, P. S. Neelakanta and G. Sreenivasan, AS Oct. 92, p492-498.

Fifect of Soil Plasticity on Cyclic Response, Mladen Vucetic and Ricardo Dobry, GT Jan. 91, p89-107.

Soil Behavior from Unconventional Loading Conditions, Kamal Tawfiq, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p272-

Dams
Applications of Viscoelastic Damper to Jointed Structures for Seismic Mitigation, C. S. Tsai and H. H. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p685-688.
Behavior of Thermal Wedges in Oscillating Reservoir Flow: A Case Investigation, Vahid Alavian, Neil Sutherland and Ming Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p501-506.
Behavior of Urusua, I Dam Andrea.

Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

p212-290.

Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-

Concrete-Faced RCC Dams, Ronnie M. Lemons, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p308-322. Corrections (ltr.), CE Mar. 92, p40.

Dams Going Safely over the Top, R. Lee Wooten, George R. Powledge and Stephen L. Whiteside, CE Jan. 92, p52-54.

The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48. Deep Tangent Piles for Rebid Beaver Dam, CE July 92, p29.

Design-Basis Flood for Rehabilitation of Existing Dams, Anand Prakash, HY Feb. 92, p291-305.

Anand Prakash, HY Feb. 92, p291-305.
Determining Causes for Taste and Odor in Bandar Abbas's Drinking Water, Mahmoud Asadi and A. R. Mesdaghinia, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p610-616.
Development of Storage Demand Relation for Reservoirs—A Probabilistic Approach, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p549-554.
Drownproofing of Low Overflow Structures. Hans J. Leu-

mau saramouz, ed., 1992), p349-534.
Drownproofing of Low Overflow Structures, Hans J. Leutheusser and Warren M. Birk, HY Feb. 91, p205-213.
An Embankment on Soft Clay With an Adjacent Cut, Walter Steiner, Richard Metzger and W. Allen Marr, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720.

Evaluating Spillway Adequacy, John K. Hawk, CE May 92, p74-76.

Polytrauic Risk of Flood Disaster Reduction at Dams, Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p549-

Hydraulic Structures Versus Zebra Mussels, John J. In-gram and Andrew C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611.

Hydraulics of Dams from a Military Perspective, Ralph A. Wurbs, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p701-706.

Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, K. H. Frizell, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439.

Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.

May 92, p64-66.
Mathematical Model for Piping, M. A. Koenders and J. B. Sellmeijer, GT June 92, p943-946.
Mechanisms of Strength Loss in Stiff Clays, Timothy D. Stark and J. Michael Duncan, GT Jan. 91, p139-154.
Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersaturation, Perry L. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p311-316. p311-316.

p311-316. Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p952. Numerical Modeling of Withdrawals at Large Dams, Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p341-346.

Numerical Prediction of Aeration in Hydroturbine Draft Tubes, M. Naghash and C. Bohac, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.293-298.

Overtopping Protection Using Roller-Compacted Concrete, Harry E. Jackson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1216-1221.

1992, p1210-1221.
1993, p1210-1221.
Post-Earthquake Slope Stability of Two Dams with Liquefied Gravel Foundations, D. W. Sykora, J. P. Koester, R. E. Wahl and M. E. Hynes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005.

Progress and Developments in Dam Rehabilitation by Grouting, Donald A. Bruce, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p601-613. RCC at 10, John Prendergast, CE Oct. 92, p44-47. RCC for Rehabilitation of Dams in the USA-An Overview, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p22-46. Rock Creek—Cresta Sediment Management Plan, Larry L. Harrison, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p102-107. Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p323-340.

Seismic Assessment of Tailings Dams, Thomas G. Har-per, Harvey N. McLeod and Michael P. Davies, CE Dec. 92, p64-66.

Dec. 92, p64-66.
Seismic Retrofit Analysis of a Homogeneous Earthfill
Dam, Suij Somasundaram, Kris S. Khilnani and Geoffrey R. Martin, (Stability and Performance of Slopes
and Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p669-684.
State-of-the-Art: Static Stability and Deformation Analysis, J. Michael Duncan, (Stability and Deformance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p222-266.
Steady and Unsteady Flow Profiles in Reclamation, Curtis J. Orvis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p872-877.
Steady-State Strength Analysis of Lower San Fernando
Dam Slide, Gonzalo Castro, Raymond B. Seed, Thomas O. Keller and H. Bolton Seed, GT Mar. 92, p406427.

Structural and Non-Structural Alternatives for Acc Structural and Non-Structural Alternatives for Accommodating Larger Floods at Dams, Louis E Buck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1228-1233.

Tackling Trapped Sediments, Scott A. Jenkins, Joseph Wasyl and David W. Skelly, CE Feb. 92, p61-63.

Ultrafine Cement Tests and Dam Test Grouting, William J. Clarke, Millard D. Boyd and Maan Helal, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p626-638.

p626-638.

Undrained Shear Strength of Liquefied Sands for Stability Analysis, Timothy D. Stark and Gholamreza Mesri, GT Nov. 92, p1727-1747.

Use of Reliability Methods for the Sequential Analysis of a Small Dam, Eric C. Drumm, Richard M. Bennett and William E. Manrod, III., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1126-1136.

Dams, arch

Dams, arch
Anchors in the Desert, Donald A. Bruce, William Fiedler
and Ronald Triplett, CE Dec. 91, p40-43.

Effect of Contraction Joints on Earthquake Response of
Arch Dam, Gregory L. Fenves, Soheil Mojtahedi and
Richard B. Reimer, ST Apr. 92, p1039-1055.

Final Design and Construction of Gibraltar Dam
Strengthening, Noel C. Wong, Theodore B. Feldsher,
Robert S. Wright and David H. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p440-458.

Roller Compacted Concrete Arch/Gravity Dams—South
African Experience, F. Hollingworth and J. J. Geringer.

Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p99-116. Santa Cruz Dam Modification, Megan Metcalf, Timothy P. Dolen and Paul A. Hendricks, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p459-475. Shape Optimization of Arch Dams for Static and Dynamic Ic Loads, Bofang Zhu, Bin Rao, Jinsheng Jia and Yisheng Li, ST Nov. 92, p2996-3015.

Ambient Temperature Effect in Concrete Dam Founda-tion Seepage, E. C. Kalkani, GT Jan. 92, pl-11. Computational Framework for 3D Nonlinear Discrete Crack Analysis, V. E. Saouma, R. W. Reich and J. Cervenka, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p788-791.

Conference Dedication to Jerome M. Raphael, Eric B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p1-4.

Design and Proposed Construction Techniques for Pangue Dam, Brian A. Forbes, Dario Croquevielle B. and Hernan Zabaleta G., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p47-62.

Dynamic Effect of Sediment on Dam Hydrodynamics, Bang-Fuh Chen, Kuo-Chyang Chang and Tin-Kan Hung, (Engineering Mechanics, Loren D. Lues, ed. and John M. Niedzwecki, ed., 1992), p345-348.

Effect of Contraction Joints on Earthquake Response of Arch Dam, Gregory L. Fenves, Soheil Mojtahedi and Richard B. Reimer, ST Apr. 92, p1039-1055.

Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

RCC at 10, John Prendergast, CE Oct. 92, p44-47.
Rehabilitation of Cocnrete Dams: Laboratory Simulation of Cracking and Injectability, G. Ballivy, K. Saleh, T. Mnif, J. Maniez, L. M. Landry and M. Nadeau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625.

Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, 0-87262-862-0, 520pp.

Dams, earth

Analysis of Behavior of Earth Dam Using Strong-Motion Earthquake Records, Mourad Zeghal and Ahmed M. Abdel-Ghaffar, GT Feb. 92, p266-277.

Analysis of Slope Failure and Remedial Design of an Earth Dam, Michael J. Mann and Robert E. Snow, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p923-939

Basic Properties of Sand and Gravel Filters (Paper intro-duced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p366-383.

Compaction Quality Control in Granular Shell of Earth Dam, Panaghiotis C. Kotzias and Aris C. Stamato-poulos, GT Aug. 92, p1247-1255.

Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dans—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p533-554.

A Current Review of Experience with Asphaltic Concrete Impervious Membranes on the Upstream Slope of Earth and Rockfill Dams, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p10-29.

Design of the Boney Falls RCC Emergency Spillway, W. J. Marold, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-

Earthquake Considerations in Earth Dam Design, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p30-54.

Earthquake-Induced Permanent Deformations: Probabilistic Approach, M. K. Yegian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50.

Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p120-203.

Filters and Leakage Control in Embankment Dams (Paper introduced by Lora P. Dunnigan), James L. Sherard and Lorn P. Dunnigan, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p411-441.

Filters for Silts and Clays (Paper introduced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992).

p384-402.

Hydraulic Fracturing in Embankment Dams (Paper introduced by Edward B. Perry), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p442-469.

Hydraulic Fracturing in Low Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p94-119.

Identification and Nature of Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan and Rey S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p285-300.

La Villita Dam Response During Five Earthquakes In-cluding Permanent Deformation, Ahmed-Waeil M. El-gamal, Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, p1443-1462.

Movement of Slopes During Rapid and Slow Drawdown, Ronaldo I. Borja and Sunil S. Kishnani, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404-On the Response of Earth Dams Subjected to Earthq

On the Response of Earth Dams Subjected to Earthquake Fault Rupture, Jonathan D. Bray, Raymond B. Seed and H. Bolton Seed, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p608-624.
One-Dimensional Settlement Analysis for Embankments Peter A. Stauffer, Richard R. Davidson, Richard S. Ladd and David B. Paul, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403.
Piezometers in Earth Dam Impervious Sections (Paper introduced by R. W. Beene and Clifford LeRoy McAnear), James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p324-365.
Pinhole Test for Identifying Dispersive Soils (Paper intro-

Pinhole Test for Identifying Dispersive Soils (Paper intro-duced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, (Em-bankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284.

Piping in Earth Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p55-93.

Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p491-505.

Some Engineering Problems with Dispersive Clays (Paper introduced by Lorn P. Dunnigan), J. L. Sherard, L. P. Dunnigan and R. S. Decker, (Embankent Dans— James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p301-311.

Three-Dimensional Seismic Analysis of La Villita Dam, A.-W. Elgamal, GT Dec. 92, p1937-1958.

Utilization of Economical Slopes for Jordanelle Dam, John A. Wilson, William O. Engemoen, Francis G. McLean and Perry J. Hensley, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653-668.

Dams, embankment Earthquake Considerations in Earth Dam Design, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p30-54.

Contributions, Sukhanander Singh, ed., 1992), p30-54.

Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p120-203.

Embankment Dams—James L. Sherard Contributions, Geotechnical Special Publication No. 32 (Sherard Memorial Volume), Sukhanander Singh, ed., 1992, 0-87262-897-3, 590p.

Eight Performance, and Analysis of Steps Piezes Cinc.

Field Performance and Analysis of Steep Riprap, Guy Lefebvre, Karol Rohan, Mahrez Ben Belfadhel and Oscar Dascal, GT Sept. 92, p1431-1448.

Filters and Leakage Control in Embankment Dams (Paper introduced by Lorn P. Dunnigan), James L. Sherard and Leakage Control Dunnigan, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p411-441.

Hydraulic Fracturing in Embankment Dams (Paper in-troduced by Edward B. Perry), James L. Sherard, (Em-bankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p442-469.

Overtopping Protection Alternatives for Dams, Noel R. Oswalt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1210-1215.
Overtopping Protection Using Roller-Compacted Corcrete, Harry E. Jackson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1216-1221.

preformance of an Embankment Dam With Partial Cut-off, Pascual H. Perazzo and Tauseef I. Choudry, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1022-1032.

1972. p102. 1032. Potentially Active Faults in Dam Foundations (Paper introduced by Clarence R. Allen), J. L. Sherard, L. S. Cluff and C. R. Allen, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p204-266.

Sinkholes in Dams of Coarse, Broadly Graded Soils (Paper introduced by Jean Lafleur), James L. Sherard, (Embankment Dams—James L. Sherard Contribu-tions, Sukhanander Singh, ed., 1992), p312-323.

Stability of Overtopped Embankment Dams, Ashok K. Chugh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p414-428.

Trends and Debatable Aspects in Embankment Dam Engineering (Paper introduced by Edward B. Perry), J. L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p403-410.

Dams, gravity

The Construction of New Victoria Dam, Australia, Robert J. Wark, Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p63-82.

The Design and Construction of Shuikou Project RCC Diversion Wall, Ma Zhong Hang, Cai Heming and E. B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

p117-131.

Design of Miel II—A High RCC Dam, Alberto Marulan-da, Fabio Amaya and Ernest Schrader, (Roller Com-pacted Concrete III, Kenneth D. Hansen, ed. and Fran-cis G. McLean, ed., 1992), p83-98.

Discussion of The Optimum Gravity Dam by J. M. Raphael, Raymond E. Davis, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p20-21.

The Optimum Gravity Dam, Jerome M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p5-19.

Francis U. McLean, ed., 1992), p5-19. Performance of Upper Stillwater Dam, Alan T. Richardson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p148-161. A Review of Design Criteria for High RCC Dams, Malcolm R. H. Dunstan, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p132-147.

17721, p132-147.

Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p99-116.

Stability of Concrete Gravity Dams with Drained and Finite Cracks, Bernard Amadei and Tissa Illangasekare, EY Dec. 92, p149-163.

s, movable

Rubber Dam Holds Water, CE Feb. 92, p88.

Concrete-Face Rockfill Dam: I. Assessment (Paper intro-duced by J. Barry Cooke), James L. Sherard and J. Barry Cooke, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p494-

511. Concrete-Face Rockfill Dam: II. Design (Paper intro-duced by J. Barry Cooke), J. Barry Cooke and James L. Sherard, (Embankment Dams—James L. Sherard Con-tributions, Sukhanander Singh, ed., 1992), p512-532.

A Current Review of Experience with Asphaltic Concrete Impervious Membranes on the Upstream Slope of Earth and Rockfill Dams, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p10-29.

Design and Performance of Bath County Upper Dam and Reservoir Slopes, K. L. Wong, D. E. Kleiner, A. M. Wood, M. C. Geary and R. G. Oechsel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p371-386

386.

Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanan—Singh, ed., 1992), p120-203.

Embankment Dams—James L. Sherard Contributions, Geotechnical Special Publication No. 32 (Sherard Memorial Volume), Sukhanander Singh, ed., 1992, 0-87262-897-3, 590pp.

Eiters, and Leakase Control in Embankment Dams.

87262-897-3, 590pp.
Filters and Leakage Control in Embankment Dams (Paper introduced by Lorn P. Dunnigan), James L. Sherard and Lorn P. Dunnigan, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p411-441.
Hybrid Grouting Techdaniques to Stabilize a Weakly Comented Sandstone at King Talal Dam, Jordan, B. Anthony, M. P. Bruen, R. R. Mann and Z. Alem, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.
Hydraulic Fracturing in Embankment Dams (Paper in

Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.

Hydraulic Fracturing in Embankment Dams (Paper introduced by Edward B. Perry), James L. Sherard, Cembankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p442-469.

Identification and Nature of Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan and Rey S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p285-300.

One-Dimensional Settlement Analysis for Embankments, Peter A. Stauffer, Richard R. Davidson, Richard S. Ladd and David B. Paul, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403.

Pinhole Test for Identifying Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284.

Rockfill Dams: Steel-Faced Dam (Paper introduced by J. Barry Cooke), James L. Sherard (Contributions, Sukhanander Singh, ed., 1992), p.9.

Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel (Stability and Performance)

Singn, ed., 1992), pl-9.
Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), plo50-1065.
Three-Dimensional Seismic Analysis of La Villita Dam, A.-W. Elgamal, GT Dec. 92, pl 937-1958.

The Upstream Zone in Concrete-Face Rockfill Dams, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p470-493.

Darcy a law
3-D Effects of Incipient Fluidization of Fine Sands in Unbounded Domains, Gerard P. Lennon, William MacNair, Richard N. Weisman and Jeffrey Lindley, (Hydraulic Engineering: Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992), p654-659.

Conversion Between Quadratic and Power Law for Non-Darcy Flow, G. H. George and D. Hansen, HY May 92, p792-797.

Data analysis
Computer Aided Design for Deep Water Offshore Risers,
C. P. Johnson, (Civi Engineering in the Oceans V.,
Robert T. Hudspeth, ed., 1992), p242-257.
Engineering Analysis of Extreme Value Data: Selection of
Models, Enrique Castillo and José María Sarabia, WW
Mar. Apr. 92, p129-146.

Mar/Apr. 92, p129-146.
Impact of Present Data Validation Practices on Risk Assessment of Hazardous Waste Sites, V. Balasundaram, C. Minch and N. Shashidhara, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p567-574.
Natural Landsidies, George F. Sowers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p804-833.
Optimizing Launchon-Time Probability, George W. Morgenthaler, AS July 92, p369-386.

Recorded Seismic Response of Pacific Park Plaza. II: Sys-tem Identification, E. Safak and M. Celebi, ST June 92, p1566-1589.

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept.

Stochastic Time-Series Representation of Wave Data, Norman W. Scheffner and Leon E. Borgman, WW July/Aug. 92, p337-351.

Date banks

Versatile Data Managing, Amin Rahman, CC June 92,

The Application of Ultrasonic Surface Detectors to Hop-per Dredge Production Monitoring, Stephen H. Scott and Angela Freeman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings

p1018-1023.

Automated Construction Field-Data Management System, Bob G. McCullouch, TE July/Aug. 92, p517-526.

Automated Identification of Construction Equipment Using Acoustical Measurements, H. Randolph Thomas, Gary R. Smith and J. G. Orlowsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed. 1992), p492-499.

ed., 1992), p492-439.

Bar Codes and Data Integration in Construction, George Stukhart, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p484-491.

Bearing Capacity of Expanded-Base Piles with Compacted Concrete Shafts, William J. Neely, GT Sept. 90,

p1309-1324.

CAD and the Corps, B. Ray Summerell, Kevin Carrigan and Jamie B. Wrenn, CE June 92, p52-54.

and Jamie B. Wrenn, CE June 92, p52-54.
Construction Applications of Vision Systems, Gary R.
Smith, H. Randolph Thomas and William Gleba,
(Computing I Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p476-483.
Contaminated Sediment Transport During Floods,
Thomas A. Fontaine, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p210212

Development of Computer Automated Bridge Inspection Process, S. S. Kuo, Thomas E. Davidson and Leonard M. Fiji, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p794-801.

Ecuador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, Ricardo Javier Moreno, SU Nov. 92, p118-129.

Effect of Jetty Configuration on Wave Conditions and Dredge Quantities at Green Harbor, MA, Cheryl E. Burke, Joan Pope and Mary A. Cialone, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p462-478.

p462-478.

Estimation of Travel Related Inputs to Air Quality Models, Terry L. Miller, Arun Chatterjee, Jerry Everett and Cindy McIlvaine, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125.

Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Morrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210.

The Flow to Licensing: Technical Data Tracking and the Licensing Support System (LSS), Jan Statler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2088-2092. 1992), p2088-2092.

GPS/Postioned Digital Video for Airborne GIS Data Acquisition, Brent Wanless, SU Aug. 92, p80-89. Information Management for the Department of Energy Office of Civilian Radioactive Waste Management, Barbara A. Cerny, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2078-2082.

Is Advanced Technology "The Gateway to Irresponsibility?", Jon E. Zufelt, El Oct. 89, p434-437.

Research Needs Related to Forensic Engineering of Con-structed Facilities, Julie Mark Cohen, W. Gene Corley, Ping K. Wong and John M. Hanson, CF Feb. 92, p3-11.

Screening Old Offshore Platforms: Previous Approaches and Further Thoughts, Peter W. Marshall, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed.,

and Further Thoughts, Peter W. Marshall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p518-530.

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Sources of GIS Data, Lowell Kent Smith and Tracy Lenocker, CC Nov. 92, p7-8.

Taming Environmental Data, Neno Duplancic and Gregory Buckle, CE Aug. 92, p56-58.

Topographic Effects on Stormflow Acidity, David Wolock, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p878-883.

Traffic Data Collection: What Really Needs to be Done? A. S. Narasimha Murthy, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p1-5.

Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.

Water Data of the International Boundary and Water Commission, Conrad G. Keyes, Jr. and Kenneth N. Rakestraw, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p584-589.

Wetland Restoration and Creation Guidelines for Mitigation, Mary C. Landin F. A. Dardeau Ir. end Inc.

ed., 1992), p384-389. Wetland Restoration and Creation Guidelines for Mitiga-tion, Mary C. Landin, E. A. Dardeau, Jr. and Jerry L. Miller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p439-444.

Data collections
Management of Scientific and Engineering Data Collected During Site Characterization of a Potential HighLevel Waste Repository, Claudia M. Newbury and Gail
W. Heitland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2093-2097.
RW-859—A Key Link Between Government and Utilities, Mary Lee Payton and Kathleen Gibbard, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p1281-1286.

Data communication
Primitive-Composite Approach for Structural Data Modeling, H. Craig Howard, Jamal A. Abdalla and D. H.
Douglas Phan, CP Jan, 92, p19-40.
Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert
Logcher, CP Jan. 92, p85-105.

Data handling

Comparison of Geographical Information Systems, Carl E. Kurt, Khurshid Mohyuddin and Bo Guo, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p17-24.

Jeff R. Wright, ed., 1992), p17-24.
Construction Applications of Relational Data Bases in Three-Dimensional GIS, Amr A. Oloufa, C. S. Papacostas and Reynaldo Espino, CP Jan. 92, p72-84.
NIAM Conceptual Data-Base Design in Construction Management, William J. Rasdorf and Osama Y. Abudayyeh, CP Jan. 92, p41-62.
User Interface for Pipe Network Program, István Lippai, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1049-1054.

and Nani G. Bhowmik, ed., 1992), p1049-1034.

Data processing
A Design Component Library Based on Design Standards, M. Maher Hakim and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p105-112.

Developments of Modelling Software for Civil Engineers, J. C. M. Dijkzeul, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p56-60.

A Framework for the Documentation, Representation,

ed., 1992), p56-60.

A Framework for the Documentation, Representation, and Processing of Design Standards, Nobuyoshi Yabuki and Kincho H. Law, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p97-104.

A Graphical Post-Processor for CE-QUAL-W2, Paul M. Craig, Kenneth C. Black and Robert E. Yager, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p61-71.

ed. and Craig Swanson, ed., 1992), pol-71. NetCDF: A Public-Domain-Software Solution to Data-Access Problems for Numerical Modelers, Harry L. Jenter and Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p72-82.

Swanson, ed., 1974.), P12-52.
New Tools to Aid in Scientific Computing and Visualization, Michael G. Wallace and Tracy L. Christian-Freat, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p462-468.

Object-Oriented Finite Element and Graphics Data-Translation Facility, Jamal A. Abdalla and C. John Yoon, CP July 92, p302-322.

A Prototype Control System for Construction Monitoring, Dulcy M. Abraham, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p631-638.

Stochastic Response of a Caster-Mounted System, Michael A. Moser and Wilfred D. Iwan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p316-319.

Data retrieval

Intelligent Retrieval System for Conditions of Contract Documents in Construction, Ayman A. Morad and Luis Arditi Rocha, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p737-745.

Linking Design Data with Knowledge-Based Construc-tion Systems, H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753.

1992), p746-753.
NetCDF: A Public-Domain-Software Solution to Data-Access Problems for Numerical Modelers, Harry L. Jenter and Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p72-82.
Sharing Waste Management Data Over a Wide Arac Computer Network, William Menke and Paul Friberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p827-832.

The Connecticut Photolog Laser Videodisc-Based Pave-ment Rating System, Richard C. Hanley and Donald A. Larsen, TE Mar./Apr. 92, p258-269.

Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Lanstord C. Beil, CO Mar. 92, 500-59.
NetCDF: A Public-Domain-Software Solution to Data-Access Problems for Numerical Modelers, Harry L. Jenter and Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p72-82.

Primitive-Composite Approach for Structural Data Modeling, H. Craig Howard, Jamal A. Abdalla and D. H. Douglas Phan, CP Jan. 92, p19-40.

Records Management in Engineering Firms, Dennis O. Hamilton, ME Oct. 91, p346-356.

Representing Building Product Information Using Hy-permedia, Sunil K. Evt, Sari Khayyal and Victor E. Sanvido, CP Jan. 92, p3-18.

Database management systems

Database management systems
Army Water Supply Management System for Installations Drinking Water Facilities, Hany H. Zaghloul,
Fadi A. Karaa, Jocelyn Clark and Matthew Korfist,
(Computing in Criti Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p145-152.
Aspects of Virtual Master Builder, Victor E. Sanvido,
Steven J. Fenves and John L. Wilson, El July 92, p261278.

Automated Construction Field-Data Management Sys-tem, Bob G. McCullouch, TE July/Aug. 92, p517-526.

Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1094-1099.

Classifying Process Control Information, Victor E. Sanvi-do and John Messner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992),

Comparing Object-Oriented and Relational Data Models for Project Control, Jae-Jun Kim and C. William Ibbs, CP July 92, p348-369.

A Comparison of Geographical Information Systems, Carl E. Kurt, Khurshid Mohyuddin and Bo Guo, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p17-24.

Cranes, Concrete, Construction...and Computers, Paul Tarricone, CE June 92, p44-47.

The Design/Build Advisor System: Integration of Data-bases with a Knowledge-Based System, Annette L. Stumpf and Thomas R. Napier, Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p950-958.

Evapotranspiration Data Management in California, R. L. Snyder and W. O. Pruitt, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-133.

Finite Element Analysis and Design of Bridges in a Dis-tributed Computing Environment, C. A. Hudson and M. A. Austin, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry, Goodno, ed. and Jeff R. Wright, ed., 1992), p671-678.

GEIS: A Geographic Information System for the Earth Sciences, Robert D. Regan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p833-838.

Geotechnical Data Management: A GIS-Based Approach, Amr A. Oloufa and Ahmed A. Eltahan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p590-597.

Glueware, Brian Brenner and Cynthia Gagnon, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1922, pl 220-1225.

Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karsmoure 1909) 214 source—In Search of Karamouz, ed., 1992), p1-6.

Katamouz, ed., 1992, p.1-a.
Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374.

Integrated Data-Base Systems, George E. Gibson, Jr. and Lansford C. Bell, CO Mar. 92, p50-59.

Integrated Pavement Management System for Kennedy International Airport, Gonzalo R. Rada, Charles W. Schwartz, Matthew W. Witczak and Scott D. Rabinow, TE Sept./Oct. 92, p666-685.

Integrating Facility Delivery through Spatial Information, Teresa M. Adams, Alan P. Vonderohe, Jeffrey S. Russell and James L. Clapp, UP Mar. 92, p13-23.

An Introduction to GIS, Lowell Kent Smith and Tracy Lenocker, CC Nov. 92, p1-6.

Linking Design Data with Knowledge-Based Construc-tion Systems, H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

Management of Scientific and Engineering Data Collected During Site Characterization of a Potential High-Level Waste Repository, Claudia M. Newbury and Gail W. Heitland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2093-2097.

Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p582-589.

Object-Oriented Approaches for Integrated Engineering Design Systems, Richard Sause, Kirk Martini and Graham H. Powell, CP July 92, p248-265.

PMSC: Pavement Management System for Small Communities, Amir Tavakoli, Mitchell S. Lapin and J. Ludwig Figueroa, TE Mar./Apr. 92, p270-280.

A Probabiliatic Regional Damage Estimation Model for Earthquake Occurrences, Dimitris Rentzis, Anne S. Kiremidjian and Craig Howard, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24.

Taming Environmental Data, Neno Duplancic and Greg-

ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24.

Taming Environmental Data, Neno Duplancic and Gregory Bucke, CE Aug. 92, p56-58.

Testing an Expert System for the Activated Sludge Process, Wenje Lai and P. M. Berthouex, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p124-146.

Unit Hydrograph Derivation Using Geographic Information System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12.

Use of a Geographic Information System for the Highway Design Review Process, Hosin Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p153-160.

Using Geographic Information Systems for Traffic Control Inventory Management, Gary S. Spring, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1-8.

Versatile Data Managing, Amin Rahman, CC June 92, p1-6.

Water's New World, Laura Lang, CE June 92, p48-50.

versatile Data Managing, Amin Rahman, CC June 92, pl-6.
Water's New World, Laura Lang, CE June 92, p48-50.
Watershed Models for Resources Management Decisions, Alan M. Lumb, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p884-

Databases
AASHTO Bridge Design System—An Engineering Software with Formal Database Management, Roy A.
Imbsen and Toorak Zokaie, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p663-670.

um, narry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p663-670.

An Analysis of Human Performance in Simulated Partial-Gravity Environments, Nathan R. Moore and David J. Gutierrez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2282-2292.

Application of Results from the Poops de Caldas Project in the Kristallin-I HL. W Performance Assessment, I. G. McKinley, W. R. Alexander, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p357-361.

Bar Codes and Data Integration in Construction, George Stukhart, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p484-491.

Bearing Capacity of Expanded-Base Piles with Compacted Concrete Shafts, William J. Neely, GT Sept. 90, p1309-1324.

pl 309-1324.

CAD and the Corps, B. Ray Summerell, Kevin Carrigan and Jamie B. Wrenn, CE June 92, p52-54.

Cleanup of a HLW Nuclear Fuel Reprocessing Center Using 3-D Database Modeling Technology, Robert C. Sauer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p859-868.

Comparing Object-Oriented and Relational Data Models for Project Control, Jae-Jun Kim and C. William Ibbs, CP July 92, p348-369.

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Construction Applications of Relational Data Bases in

Construction Applications of Relational Data Bases in Three-Dimensional GIS, Amr A. Oloufa, C. S. Papacostas and Reynaldo Espino, CP Jan. 92, p72-84.

Data Bases About the Transportation of Radioactive Ma-terials, Cheryl Cashwell and James D. McClure, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p427-431.

Data Needs for Locating Emergency Response Units, George F. List, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p437-441.

Demand Management Strategies for Providence Water Supply Board, Arun K. Deb, Frank M. Grablutz and Paul Gadoury, Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p169-

Developing Infrastructure Lifecycle Solutions, Steven B. Glimpee and Jeffrey M. Young, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p818-524.

Extended Experience with a Short-Term Hydropower Scheduling Model in New England, Paul H. Kirshen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.299-304.

Neely, Jr. and Robert Neathammer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p129-136.

ed., 1992, p.125-19.
GeoLink: Integrating GIS and GPS for Land Use Planning, Road Mapping, and Environmental Analysis, Douglas Richardson and Thad Mauney, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p325-327.

ed., 1972, p.52-521.

A GIS Based Synthetic Watershed Sediment Routing Model, Roger H. Smith, Surya N. Sahoo and Larry W. Moore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p200-207.

GIS: New York's Pipe Dream, Harvey P. Moutal, David R. Bowen and Wendy Dorf, CE Feb. 92, p66-67.

Graphics-Based Site Information Management at Han-ford TRU Burial Grounds, Samuel R. Rod, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p450-457.

How to Implement GIS: Tools and Procedures, Robert Newton, CC Nov. 92, p9-11.

Interpolation Functions for Use with ORIGEN-2 Data, R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p77-81.

Knowledge Representation in Water Resource Management Using Prolog and Natural Language, Richard N. Palmer and Lynn Spence, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, gineers: Knowledge ed., 1992), p144-160.

Linking Data Bases to Hydraulic Computations, Brian R. Turcotte and N. Davies Mtundu, CP Jan. 92, p63-71.

Turcotte and N. Davies Mtundu, CP Jan. 92, p63-71.

NIAM Conceptual Data-Base Design in Construction
Management, William J. Rasdorf and Osama Y. Abudayyeh, CP Jan. 92, p41-62.

Ontario Hydro Used Fuel Transportation Assessment, L.
Grondin, D. Ribbans and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p1209-1215.

A Preliminary Report on OCR Problems in LSS Document Conversion, T. A. Nartker, J. Kanal and S. V. Rice, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2106-2108.

Primitive-Composite Approach for Structural Data Modeling, H. Craig Howard, Jamal A. Abdalla and D. H. Douglas Phan, CP Jan. 92, p19-40.

Quality Assurance in a Cask Fleet Parts Control System, Charles Fernandez, P. N. McCreery and L. B. Shappert, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1343-1348.

Restricting Rockfalls, Richard D. Andrew, CE Oct. 92,

Sharing Waste Management Data Over a Wide Area Computer Network, William Menke and Paul Friberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p827-832.

A Shell Approach to Modeling Oil Spill Trajectory and Fate and Search and Rescue Operations, M. L. Spaulding, E. Howlett, K. Jayko, E. Anderson and T. Isaji, (Estuarline and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p157-174.

Spent Fuel Characteristics Provided by the CDB—An Update, K. J. Notz, R. Salmon, T. D. Welch, W. J. Reich and R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p122-130.

Stochastic Modelling of Strong Ground Motions for the Istanbul, Turkey Area from Seismic Data for the Surrounding Region, Kirsten L. Findell and Ahmet S. Çakmak, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-271.

Throughput Study for the Civilian Radioactive Waste Management System, Peter Gottlieb, William Bailey, Ill., Flora Emami, Lawrence M. Ford and John F. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1349-1358.

Committee, 1992), p1349-1338.

Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert Logcher, CP Jan. 92, p85-105.

Using the ORIGEN2 Computer Code for Near Core Activation Calculations, A. T. Luksic and B. D. Reid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p82-87.

LUIII of ORIGEN2 by the Characteristics, Data

Utilization of ORIGEN2 by the Characteristics Data Base, Tim D. Welch and Karl J. Notz, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-

Meather Advisor System for Construction Duration Esti-mation: Potential of Integrating KBS's and CD-ROM Databases, Diego Echeverry and Moonja P. Kim, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p833-840. When Disaster Strikes, ASCE Wants to Help, CE June 92,

ucca Mountain Digital Database, Carl R. Daudt, Char-lotte Abrams and William J. Hinze, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p442-449.

Daubert, Henry

Henry Daubert, Former Director of District 15, Dies at 68, NE Oct. 92, p3. Dead loads

Effects of Dead Loads in Dynamic Plates, Hideo Takaba-take, ST Jan. 92, p34-51.

Simplified Building Analysis with Sequential Dead Loads—CFM, Chang-Koon Choi, Hye-Kyo Chung, Dong-Guen Lee and E. L. Wilson, ST Apr. 92, p944-

Deason, Jonathan P. ASCE's Deason is Federal Engineer of the Year for 1992, NE Apr. 92, p16.

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066.

Bridge Pier Scour with Debris Accumulation, Bruce W. Melville and D. M. Dongol, HY Sept. 92, p1306-1310. Conditions for Initiation of Rainfall-Induced Debris Flows, Nicholas Sitar, Scott A. Anderson and Kenneth A. Johnson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p834-849.

Debris Torrents and Professional Responsibilities, S. O. Russell, El Jan. 90, p49-55.

Guidance for Decontamination of Debris, Mackenzie L. Davis, Gene P. Chou, William G. Sproat, Jr. and Peter J. Shields, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p49-54.

In-Channel Sediment Basins: An Alternative to Dam-Style Debris Basins, Wendy S. Gist, Scott E. Stones-treet and Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p1000-1005.

Innovative Intake Design for Raritan River, Paul Y. Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p220-225.

Model for Transport of Floating Debris in the Ocean, Y. C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.

Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, R. H. Sues and L. A. Twisdale, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

p511-514

Routing Debris Flows with Particle Segregation, Tamotsu Takahashi, Hajime Nakagawa, Tatsuo Harada and Yousuke Yamashiki, HY Nov. 92, p1490-1507.

Salvage Law for Outer Space, Wayne N. White, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422.

Small Stream Classification—A Process Based Approach, Jeffrey B. Bradley and Peter J. Whiting, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p695-700.

Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.

Trash Rack Blockage in Supercritical Flow, Steven R. Abt, Thomas E. Brisbane, David M. Frick and Charles A. McKnight, HY Dec. 92, p1692-1696.

Tying Back a Landslide, Stephen J. Klein, CE Dec. 92, p40-43.

Integrated Physical Model for Cylindrical Shells, Demetres Briassoulis, ST Aug. 92, p2168-2185.

Microorganism Survival in Ice-Covered Marine Environ-ment, S. J. Stanley, D. W. Smith and G. D. Milne, CR ment, S. J. Stanl June 92, p58-72.

Shoaling and Decay of Two Wave Trains on Beach, Jane McKee Smith and Charles L. Vincent, WW Sept./Oct. 92, p517-533.

## Decision making

Advanced Construction Management for Lunar Base Construction—Surface Operation Planner, Robert P. Kehoe, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1546-1556.

Application of Decision Support Systems (DSS) to the Management of Radioactive Wastes, René F. Reitsma and Jacquelyn F. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p469-474.

Aversion to Epistemic Uncertainties in Rational Decision Making: Effects on Engineering Risk Management, M. Elisabeth Paté-Cornell and Paul S. Fischbeck, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p200-218.

Bootstrapping Models Using Existing Databases and Ob-ject Orientation, Rene F. Reitsma and David Sieh, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p598-605.

Codification of Design Load Criteria Subject to Modeling Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007.

A Connectionist Vertical Formwork Selection System, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1171-

Container Terminal Planning: 2001, James E. Davis, (Ports '92, David Torseth, ed., 1992), p15-28.

Customer Requirements in Industrialized Housing, Robert L. Armacost, Paul J. Componation, Michael A. Mullens and William W. Swart, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p48-57

Dealing with Uncertainty: From Health-Risk Assessment to Environmental Decision Making, Anthony L. Cox, Jr. and Paolo F. Ricci, EY Aug. 92, p77-94.

Jr. and ratio F. Neck, E. P. Ang, 92, p17-20.
Decision Analysis Model for Well Rehabilitation and Groundwater Development, Moses Lake, Washington, R. H. Anderson, W. J. Roberds and D. Banton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p537-542.

A Decision Analysis of an Exploratory Studies Facility, M. W. Merkhofer and P. Gnirk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992).

p650-656.

Decision Management for the Hanford Environmental Dose Reconstruction Project, William J. Roberds, H. A. (Walt) Haerer and Detlof von Winterfeldt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992) 421-1560. 1992), p1743-1750.

Decision Support System for Crop Planning during Droughts, H. Raman, S. Mohan and N. C. V. Ranga-charya, IR Mar./Apr. 92, p229-241.

Decision Support System for Multiobjective Service Route Design, Jin-Yuan Wang and Jeff R. Wright, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

Democracy and Expertise: The Story of Ringhals 3 in Sweden, Göran Sundqvist, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p166-172.

The DOE Office of Environmental Restoration and Waste Management Comprehensive Integrated Planning Process, Richard J. Aiken, Cyril W. Draffin, Jr. and Karl T. Pflock, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1555-1558.

Enhancing Decision Analysis Techniques for Lunar Base Construction Research, Walter W. Boles and David B. Ashley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p341-349.

Environmental Amenities and the Location of Industrial Activity, Tim Allison and Frank Calzonetti, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p587-592.

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90,

p281-299

A Facility Programming Product Model, Gregory M. Perkinson, Francois Grobler and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p41-48.

Geographic Information Systems—Evolutionizing the Decision Making Process, Dennis H. Klein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1204-1211.

Group Prioritization System for Army Military Construc-tion, Bruce C. Goettel, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p49-56.

Icon-Based Concept for Exploring Rover Autonomy, J. H. Allton and Damian Lyons, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2400-2411.

Identifying the Critical Path and Building Coalitions for Restoring Degraded Areas of the Great Lakes, J. H. Hartig, D. P. Dodge, L. Lovett-Doust and K. Fuller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p823-830.

Improved First-Order Uncertainty Method for Water-Quality Modeling, Charles S. Melching and Sharath Anmangandla, EE Sept./Oct. 92, p791-805.

Information Theory and Multi-Objective Evaluation, Jay R. Lund and Morris Israel, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p486-491

Integrated Assessment of Environmental Risk and Human Response, Mitchell J. Small, (Risk-Based Deci-sion Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p78-91.

Irrigation Uniformity Relationships for Irrigation System Management, Albert J. Clemmens, IR Sept./Oct. 91, p682-699.

Level of Significance Selection in Engineering Analysis, Kaye L. Brubaker and Richard H. McCuen, El Oct. 90, p375-387.

Neural Networks and their Applicability within Civil Engineering, James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1155-1162.

Planning and Management of Water-Resource Systems in Developing Countries, M. Miloradov, WR Nov./Dec. 92, p603-619.

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

CO Dec. 22, p73-611.
Prescriptive Model for Missouri River Reservoiroperation Analysis, David T. Ford, (Water Resources
Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad
Karamouz, ed., 1992), p555-560.

Rationalizing Water Requirements with Aid of Fuzzy Allocation Model, Janusz Kindler, WR May/June 92, p308-323.

Risk-Based Decision Making in Water Resources V, ISSN: 1063-5076, Yacov V. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, 0-87262-899-X, 395pp.

O-87262-899-X, 395pp.
A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering: Saving a Threatened Resource-In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416.
Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.
Session Summary—Behavioral, Social, and Institutional Aspects of Risk Analysis, Mitchell Small, (Risk-Based Decision Making in Water Resources V., Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p355-357.
Systems Analysis in Water-Distribution Network Design:

Systems Analysis in Water-Distribution Network Design: From Theory to Practice, I. C. Goulter, WR May/June 92, p238-248.

7. p.230-248. Three-Dimensional Analytical Techniques for Assessing Overburden Toxicity as a Decision-Making Tool for Reclaimability Determinations, L. A. Parsons, K. Kirk and A. Wilhelm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p839-845.

Uncertainty in Regulatory Decision-Making, D. Fehr-inger and S. Coplan, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p106-109.

Using Conflict Management for Better Decision Making, Amarit Singh and Demetres A. Vlatas, ME Jan. 91, p70-82.

Using Expert Systems to Manage Professional Survey Practices, T. K. Koo and Y. B. Aw, SU May 92, p43-62. Validation, Acceptance and Licensing: How Much Scientific Facts Can the Process Digest? Clas-Otto Wene, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p110-115. Water Supply Operations During Drought, Jhih-Shyang Shih and Charles ReVelle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p310-315.

ater-Quality Modeling for Decision Making, G. T. Orlob, WR May/June 92, p295-307.

lob, WR May/June 92, p295-307.

Decision support systems:
Computer Support for Water Quality Management in San Diego Bay, A. E. Bale and G. T. Orlob, (Water Resource-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p176-181.

Computer-Aided Support for Water Quality Modeling of the Russian River, John F. DeGeorge and Gerald T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p182-187.

Cost Models for Preliminary Economic Evaluation of Sprinkler Irrigation Systems, D. Kumar, C. D. Heatwole, B. B. Ross and D. B. Taylor, IR Sept./Oct. 92, p757-775.

Decision Support System for Water Quality Modeling.

2., p(3)-173.
A Decision Support System for Water Quality Modeling, D. S. Yakowitz, L. J. Lane, J. J. Stone, P. Heilman and R. K. Reddy, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p188-193.

intitions, Mohammad Karamouz, ed., 1992), p188-193.
A Demand Driven Decision Support System for Operation of Reservoirs, Haralambos V. Vasiliadis and Mohammad Karamouz, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p561-566.

p.501-300.

Expert System for Agricultural and Water Quality Management, William L. Magette and Adel Shirmohammadi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p442-447.

179.2], 0442-441.
Ground-water Policy-making Support: USEM Optimization Modeling Plus GIS and Graphics, Richard C. Peralta, Christopher M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza, Douglas Ramsey and Kurt Vest, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p305-310.

1992), p305-310.

A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416.

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Decision theory

An Approach for Incorporating Inflows Uncertainty in Management Models, Luis Vives, Jesús Carrera and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Decomposition
Data Abstraction in Engineering Software Development,
John W. Baugh, Jr. and Daniel R. Rehak, CP July 92,
p282-301.

Deep foundations

Deep Cuts and Ground Movements in Chicago Clay, Richard J. Finno, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143.

Efficiency Formula for Pile Groups, Sayed M. Sayed and Reda M. Bakeer, GT Feb. 92, p278-299.

Stresses Induced by Surficial and Deep Loading in Elastic Medium, Olivier Rossa and Gabriel Auvinet, GT Aug. 92, p1241-1246.

Advanced Structures in Very Deep Water, Richard J. Seymour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952.

ruuspetn, ed., 1992), p948-952.
Computer Aided Design for Deep Water Offshore Risers, C. P. Johnson, (Criti Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p243-257.
Corrosion Fatigue of Deepwater Offshore Materials, Godon F. Fowkes and Harris L. Marcus, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.

Cyclic Behavior of a Deepwater Normally Consolidated Clay, Rathindra N. Dutt, Earl H. Doyle and Richard S. Ladd, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p346-559.

Deep Water Container Wharf & Crane Foundation, John E. Gant, (Ports '92, David Torseth, ed., 1992), p238-E. (

Design of Tension Leg Platforms: A Knowledge Based Approach, John M. Niedzwecki and Oriol R. Rijken, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p288-293.

Dynamic Design of Deepwater Bottom-Founded Towers Denby Grey Morrison, (Civil Engineering in th Oceans V, Robert T, Hudspeth, ed., 1992), p850-889.

Dynamic Response Characteristics of Jack-Up Drilling Units, David T. McDonald and Robert G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p906-920.

Extremal Wave Statistics Using Three Hindcasts, Robert M. Wyland and Edward B. Thornton, WW Jan./Feb. 91, p60-74.

91, p00-74.
Homopolar Pulse Butt Welding of API 5L Line Pipe, Paul W. Haase, Zwy Eliezer, Robert Carnes, John Gully and Mike Harville, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p813-827.
Measured and Simulated Response of a Small Semisubmersible Moored in Deep Water, Robert F. Zueck, Stuart F. Pawsey and Steve J. Leverette, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p114-128. 1992), p114-128.

Model Tests for Expansion of Anaheim Bay Naval Har-bor, Robert R. Bottin, Jr. and Dan Muslin, (*Ports '92*, David Torseth, ed., 1992), p768-776.

The Mother of All Resiliem Structures: Fixed-Base Tower in 3000-Foot Water and Some Outstanding Issues, Peter W. Marshall, Susan L. Smolinski and Denby G. Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p258-272.

Nonlinear Diffraction of Random Waves by a Vertical Cylinder, Ahsan Kareem, C. C. Hsieh and A. N. Williams, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p459-

Offshore Structures—Past, Present, and Future, Lyle Finn, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p218-242.

Old Problems and New Challenges in Marine Geotechni-cal Engineering, Wayne A. Dunlap, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1051-1069.

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.

Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352.

Use of Manned Submersibles to Investigate Slumps in Deep Water Gulf of Mexico, Earl H. Doyle, Michael J. Kaluza and Harry H. Roberts, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), 9770-782.

Application of Fracture Mechanics Methodology to Assessment of Weld Defects in Offshore Platforms, T. M. Hsu, E. W. Carter, S. L. Fu and J. S. Mitchell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p733-749.

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

Development of Computer Automated Bridge Inspection Process, S. S. Kuo, Thomas E. Davidson and Leonard M. Fiji, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p794-801. Manufactured Wood Joists—Noncollapse Failure, Theodore G. Padgett, Jr., CF Feb. 92, p58-64.

Definitions
ASCE Backs Revised Wetlands Manual From EPA, NE Jan. 92, p2.

Analysis of Thick Circular Plates Undergoing Large Deflections, M. Gorji, J. A. Abuyan and K. S. Y. Li, AS Jan. 92, p138-153.

The Analysis Related to the Impact of Composite Panels, Ronald Perry, Anthony Palazotto and Raghbor Sandhu, (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1286-1296. Approximating Lateral Stiffness of Stories in Elastic Frames, Arturo E. Schultz, ST Jan. 92, p243-263. Asymptotic Analysis of TLP Tendons and Risers, C. Oran, EM Jan. 92, p56-73.

Axisymmetric General Shells and Jointed Shells of Revolution, Pe i Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

Creep Effects in Composite Beams with Flexible Sheer.

p3180-3202.

Creep Effects in Composite Beams with Flexible Shear Connectors, Angelo Marcello Tarantino and Luigino Dezi, ST Aug. 92, p2063-2081.

Deflections of Beams with Varying Rectangular Cross Section, Filippo Romano and Gaetano Zingone, EM Oct. 92, p2128-2134.

Energy Equation for Beam Lateral Buckling, Yong Lin Pi, N. S. Trahair and S. Rajasekaran, ST June 92, p1462-1479.

1479. Finite Element Analysis and Design of Bridges in a Distributed Computing Environment, C. A. Hudson and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p671-678. Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p912-915.

Loren D. Lutes, ed. and John M. Niedzwecki, eu., 1992), 912-915.
Howe Truss Behavior Interpreted by Deflections, Zbigniew Cywiński, Marek Jasina and Stefan Niewitecki, CF Aug, 92, p151-160.
Hypar Shell on Pasternak Foundation, D. N. Paliwal, S. N. Sinha and A. Ahmad, EM July 92, p1303-1316.
Pile Lateral Load Test in the Port of Los Angeles, Mathew F. Hunter, Allen M. Yourman, Gerald M. Diaz and Hsueh-Hsin Chu, (Ports '92, David Torseth, ed., 1902), a122-335. 1992), p322-335.

1992, p322-33.
Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflectograph, Wim Th. Hoyinck and Joop van Zwieten, (Road and Airport Pawement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert

A. Eaton, ed. 1992), 963-77.

Prevention of Stress Relaxation in Viscoelastic Structures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

1852.
Refined Analysis of Load Distribution Factors for Bridges, M. A. Issa, Huiming Li, M. Arockiasamy, M. Shahawy and M. Issa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p260-263.
Reliability Analysis of Plates with Initial Deflection by Entropy Model, Miyamura Atsunori, Kohama Yoshiro and Takada Toyofumi, (Probabilistic Mechanics and Structural and Gotechnical Reliability, Y. K. Lin, ed., 1992), 553-567.

1992), p559-562.

 1992), p559-562.
 Reliability Consideration in Shakedown Analysis, K. C.
 Reliability Consideration in Shakedown Analysis, K. C.
 Chou and T. V. Galambos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p204-207.
 Residual Deformation Analysis for Inelastic Bridge Rating, Burl E. Dishongh and Theodore V. Galambos, ST June 92, p1494-1508.
 Response of Plates of Arbitrary Shape Subject to State Loading, K. M. Liew, EM Sept. 92, p1783-1794.
 Shock Pattern at Abrupt Wall Deflection, Markus Schwalt and Willi H. Hager, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p231-236. 1992), p231-236.

1992, p231-250.
Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsam, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p215-225.

Sture, ed., 1992), p215-225.
Straight, Single-Tapered Composite I-Beams of Orthotropic Materials, Robert J. Leichti and Chai H. Yoo, MT Nov. 92, p399-414.
Strain and Stress Measurements in Pavements, Matti Huhtala and Jari Pihlajamäki, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p229-243.
Stress Wave Interaction in Finite Beam on Elastic Foundation, M. C. Wang and C. S. Little, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p586-583. chanics, Loren D. Lui ed., 1992), p580-583.

Stresses in Open Section Fiber Reinforced Composite Beams Under Constant Shear Loading, Albert G. Zvar-ick and Thomas A. Cruse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1067-1070.

1992), p1067-1070.
Structural Performance of Hardwood-Metal Composite Beams, Robert H. Kim and Jai B. Kim, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p718-731.
Variational Solutions of the Von Karman Plate Theory Based on a Mixed Formulation, Wan-Lee Yin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p656-659.

Detormation
An Airfield Pavement Forensic Analysis: Cairo East Air
Base, Randolph Charles Ahlrich and Gary Lee Andertion, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p39-52.

p39-32.

Analysis of Internal Discontinuities in Geo-Materials, Dunja Perić, Stein Sture and Kenneth Runesson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p292-293.

Analysis of the Georgia Dome Cable Roof, Gerardo Castro and Matthys P. Levy, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), Analytical Medaline of Bental A.

Analytical Modeling of Bonded Bars under Cyclic Loads, Parviz Soroushian, Kienuwa Obasaki and Shashidhara Marikunte, ST Jan. 91, p48-60. Bolded Connections in Wood under Bending/Tension Loading, R. Davalos-Sotelo and P. J. Pellicane, ST Apr. 92, p999-1013.

92, p999-1013.

Complementary Potentials of Finite Elasticity, Gerald Wempner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p506-509.

Complete Biaxial Load-Deformation Behavior of RC Columns, Gang Gary Wang and Cheng-Tzu Thomas Hsu, ST Sept. 92, p2590-2609.

Composite Beams with Partial Interaction under Sustained Loads, Mark Andrew Bradford and R. Ian Gilbert, ST July 92, p1871-1883.

Computational Gradient Plasticity, R. de Borst, H. -B. Mühlhaus and J. Pamin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p776-779.

Construction Induced Movements of Insitu Walls, G.

Construction Induced Movements of Insitu Walls, G. Wayne Clough and Thomas D. O'Rourke, (Design and Performance of Earth Retaining Structures, Philip Lambe, ed. and Lawrence A. Hansen, ed., 1990), p439-

Creep and Creep Rupture of Metallic Composites, D. N. Robinson, W. K. Binienda and M. Miti-Kavuma, EM Aug. 92, p1646-1660.

Debonding of a Inhomogeneity from a Plastic Matrix, Alan J. Levy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p252-255.

Deformational Behavior of Fiber-Reinforced Concrete Beams in Bending, H. V. Dwarakanath and T. S. Nagaraj, ST Oct. 92, p2691-2698.

The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79.

Earthquake-Induced Permanent Deformations: Probabilistic Approach, M. K. Yerian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50.

Effect of Water on the Consolidation of Crushed Rock Salt, M. L. Wang, S. K. Miao, A. K. Maji and C. L. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p531-534.

and John M. Niedzwecki, ed., 1992), p.331-334. Elastoplastic Deformation for Particulates with Friction-al Contacts, Ching S. Chang, Anil Misra and Kofi Acheampong, EM Aug. 92, p1692-1707. An Embankment on Soft Clay With an Adjacent Cut, Walter Steiner, Richard Metzger and W. Allen Marr, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720.

Energy Dissipation in Determinate Steel Beams, Helen M. Goldsworthy and Len K. Stevens, ST Jan. 92, p1-

Energy Dissipation in Indeterminate Steel Beams, Helen M. Goldsworthy and Len K. Stevens, ST Jan. 92, p18-33.

Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, GT May 90, 9774-789.

Evaluation of Fine Aggregate Particle Shape and Texture, E. R. Brown, P. S. Kandhal and James W. Winford, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p216-230.

The Evaluation of Slope Stability—A 25 Year Perspective, Norbert R. Morgenstern, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1-26.

Evolution of Damage in Brazilian Test Using Holographic Interferometry, A. Castro-Montero, Z. Jia and S. P. Shah, (Engineering Machanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p612-615.

Experimental Investigation of Bending and Twisting Coupling in Thin-Walled Composite Beams, Lawrence C. Bank and Steven J. Smith, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-887.

Experimental, Physical and Numerical Modeling of Lune.

Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p884-887.

Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-200.

Finite Element Analysis of Slopes with Layer Reinforcement, Robert M. Ebeling, John F. Peters and Reed L. Mosher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1427-1443.

Free Boundary, Fluid Flow, and Seepage Forces in Excavations, Ronaldo I. Borja, GT Jan. 92, p125-146.

La Villita Dam Response During Five Earthquakes Including Permanent Deformation, Ahmed-Waeil M. Elgamal, Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, p1443-1462.

Large Deformation Elastic Behavior of Low-Density Solid Foams, William E. Warren and Andrew M. Kraynik, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p143-146.

Measurement of Deformations in Buried Pipeline, W. F. Teskey, D. A. Bayly and I. R. Colquhoun, SU Feb. 92, p1-10.

pi-10.

Mechanical Properties of Compacted Lunar Simulant
Using New Vacuum Triaxial Equipment, Chandra S.
Desai, Hamid Saadatmanesh and Tom Allen, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1240-1249.

Mechanics of Growing Deformable Solids: A Review, V.
E. Naumov, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p510-513.

Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, Ali M. Hamza and Antoine E. Nasman, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), p996-999.

Movement of Slopes During Rapid and Slow Drawdown,
Ronaldo I. Borja and Sunil S. Kishnani, (Stability and
Performance of Slopes and Embankments II, Raymond
B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404413.

413. Necking of Creep-Cavitating Bars, C. H. Lu and A. J. Levy, EM Apr. 92, p746-762. Nonisothermal Viscoplasticity, Marc Benowitz and Maciej P. Bieniek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p244-247.

247.
On the Bifurcation of Elasto-Plastic Crystals During Multiple Slip, Ronaldo I. Borja and Jon R. Wren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p284-287.
On the Influence of Seismically Induced Residual Forces on Bridge Abutment Design, Raj Siddharthan and Mahmoud El-Gamal, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p51-54.

p51-54.

One-Dimensional Settlement Analysis for Embankments, Peter A. Stauffer, Richard R. Davidson, Richard S. Ladd and David B. Paul, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p537-403.

Pavement Instrumentation for Verifying Elastic Theory, S. Nazarian, E. Y. Chai and D. R. Alexander, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p306-320.

Prebuckling Deflections and Lateral Buckling. I: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Appli-cations, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2967-2985

Prevention of Stress Relaxation in Viscoelastic Struc-tures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

Rosa. Republication of Composite Panels, Ahmed K. Noor, C. M. Andersen and Jeanne M. Peters, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883.

Reinforcement Anchorage Slip under Monotonic Load-ing, Jaber M. Alsiwat and Murat Saatcioglu, ST Sept. 92, p2421-2438.

ing, Jaber M. Alsiwat and Murat Saatcioglu, ST Sept. 92, p2421-2438.

Response of Space Structures Under Sudden Local Damage, Ramesh B. Malla and Baihai Wang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p909-920.

Seismic Hazard Analysis for Crude Oil Pipelines in the New Madrid Seismic Zone, Michael J. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p125-139.

Seismic Retrofit Analysis of a Homogeneous Earthfill Dam, Suij Somasundaram, Kris S. Khilmani and Geoftery R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p669-684.

Serviceability Analysis of Wood Beams with Creep, David V. Rosowsky, Kenneth J. Fridley and Timothy A. Philpot, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90.

Shear Zone Formation and Slope Stability Analysis, Scott E. Shewbridge and Nicholas Start, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370.

Simple Cord Composites, Anthony J. Paris, Ching-Chang Lin and George A. Costello, EM Sept. 92, p1939-1948.

Site Qualification for Inclinometer Surveyng Using Tiltmeters, Howard Egan, Gary R. Hotzhausen and Dan Sampson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551.

Slope Displacement from Pile Driving, Richard E. Riker, Donald G. Anderson and D. Dexter Bacon, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551.

p292-309.

p.292-309.
State-of-the-Art: Static Stability and Deformation Analysis, J. Michael Duncan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.222-266.
Stiffness Expressions for Element with Central and End Springs, R. E. McConnel and A. I. El-Sheikh, ST Apr.

Springs, R. E. 92, p955-969.

92, p953-969.
Stochastic Dynamics of Hysteretic Systems, Lucia Faravelli and Paolo Venini, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p53-56.
Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.
Thin-Walled Space Frames. I: Large-Deformation Analysis Theory, Hong Chen and George E. Blandford, ST Aug. 91, p2499-2520.
Threatened Levees on Sherman Island, Roger Foott, Threatened Levees on Sherman Island, Roger Foott,

Aug. 91, p2499-2520.

Threatened Levees on Sherman Island, Roger Foott, Richard Sisson and Roy Bell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p756-774.

Time-Dependent Analysis of Composite Steel-Concrete Sections, R. Ian Gilbert, ST Nov. 89, p2687-2705.

Use of Engineering Strain and Trefftz Theory in Buckling of Columns, C. M. Wang and W. A. M. Alwis, EM Oct. 92, p2135-2140.

92, p.2135-2140.
Deformation analysis
Discontinuous Deformation Slope Stability Analyses, An-Bin Huang and Max Y. Ma, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p479-492.
Predicting the Performance Limits of Soil-Culvert Systems, Yahia E. -A. Mohamedzein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911.

Residual Deformation Analysis for Inelastic Bridge Rat-ing, Burl E. Dishongh and Theodore V. Galambos, ST June 92, p1494-1508.

June 92, p1494-1508.
Seismic Stability and Permanent Deformation Analyses:
the Last Twenty Five Years, W. F. Marcuson, III., M.
E. Hynes and A. G. Franklin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed,
ed. and Ross W. Boulanger, ed., 1992), p552-592.
Use of Shi's Discontinuous Deformation Analysis on
Rock Slope Problems, Man-chu Ronald Yeung and
Richard E. Goodman, (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p461-478.

Degradation - Degradation Process in Alluvial Channels, Chin-lien Yen, Shou-young Chang and Hong-Yuan Lee, HY Dec. 92, p1651-1669.
Conservative Tracers for the C-Well Hydraulic Testing, Tonya Dombrowski, Gary Coates and Klaus J. Stetzenbach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1991-1996.
International Status of Dry Storage of Spent Fuels, K. J. International Status of Dry Storage of Spent Fuels.

International Status of Dry Storage of Spent Fuels, K. J. Schneider, S. J. Mitchell and A. B. Johnson, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p1159-1165.

hitigation of Dust Contamination During EVA Opera-tions on the Moon and Mars, Peter E. Glaser, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1512-1522.

New Technique to Evaluate the Surface Degradation of Cementaneous Matrix, Takayuki Amaya and Kazunori Suzuki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p1670-1675 Random Initial Heterogeneity and Degradation in Brittle Materials, X. Yuan, F. F. Tang and G. Frantziskonis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p616-619.

Reliability of Degrading Dynamic Systems with Applica-tions, Mircea Grigoriu and Igor Rychlik, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p300-303.

Y. K. Lin, ed., 1992), p300-303.
Remaining Technical Barriers to Obtain General Acceptance of Geosynthetics, Robert M. Koerner, Yick Hsuan and Arthur E. Lord, Jr., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p63-109.
Review of NPP Concrete Degradation Factors and Assessment Methods, T. M. Refai and M. K. Lim, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p182-193.

Degradation failures
Modeling Stiffness Degradation in Filamentary Composite Materials, Robert M. Hackett and Kerry T. Slattery,
MT May 92, p196-211.

Degrees of freed

Degrees of freedom
A Coordinate Reduction Technique With Mass Correction for Dynamic Analysis of Structural Systems, Wenlung Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p61-64. Equivalence Between Motions with Noise-Induced Jumps and Chaos with Smale Horseshoes, Michael Frey and Emil Simiu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p660-663. Free Vibration Analysis of Asymmetric Buildings, Sean Wilkinson and David Thambiratnam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p461-465.
Highly Accurate Adaptive hp-Methods for Linear Elastostatics, J. Tinsley Oden, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p628-631.

Pattern Formation and Time-Dependence in Flowing Sand, R. P. Behringer and G. W. Baxter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1028-1030.

Deicing
Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p325-338.

FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarreta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p940-945.

Reliability-Based Design for Feoeze-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9462-475.

Analysis of Delamination of Post-Tensioned Silos, Judith J. Stalnaker and Mark D. Fugler, ST Apr. 92, p1014-

Macromodeling of Complex Composites, P. K. Basu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1071-1074.

57 Years of Coastal Engineering Practice at a Problem Inlet: Indian River Inlet, Delaware, Jeffrey A. Gebert, Keith D. Watson and Augustus T. Rambo, (Coastal En-gineering Practice '92, Steven A. Hughes, ed., 1992), p503-519.

Delay time

Contractor Can't Be Held Responsible for Delays, CE Sept. 92, p32.

The Design and Use of Flow-Through Hold Pads, Douglas F. Goldberg, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992),

Offending Agency Dictates Damages for Delay Pay, CE Aug. 92, p22.

Optimizing Launch-on-Time Probability, George W. Morgenthaler, AS July 92, p369-386.

Planning for Movement of Very Large, Slow-Moving Vehicles, John Morrall, Walid Abdelwahab and Al Werner, TE May/June 92, p381-390.

Protecting Engineer Against Construction Delay Claims: NDC, David M. Leishman, ME July 91, p314-333.

Time-Delay Effect on Dynamic Response of Actively Controlled Structures, Surjit S. Dhillon and William C. Lennox, AS Oct. 92, p450-464.

TRB Report Predicts Little Future Airport Construction, CE Jan. 92, p21-22.

Delivery

Mixing and Delivery of Roller Compacted Concrete, Robert Oury and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p242-257.

Design-Basis Flood for Rehabilitation of Existing Dams, Anand Prakash, HY Feb. 92, p291-305.

Channel Restoration Above Elephant Butte Reservoir, Christopher A. Gorbach, (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p114-119

Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.

Engineering-Econometric Model of Energy Demand, Fa-brizio Carlevaro, Jean-Luc Bertholet, Jean-Paul Chaze and Patrick Taffé, EY Aug. 92, p109-121.

Demographic projections
The Engineer's Role in Sustainable Development, V. Rajagopalan, CE Aug. 92, p6.
Technical Personnel Shortages in Construction Industry,
Russel C. Jones, El Jan. 90, p16-26.

Out with the Old, Thomas B. Terpening and Michael Irwin, CE Sept. 92, p50-53.

Biochemical Control of Sulfide Production in Wastewater Collection Systems, Ricardo B. Jacquez and Hamdy H. El-Rayes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p327-333.

Effluent Nitrite Accumulation in the Heterotrophic Denitrification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, Paul A. Dombrowski and James C. O'Shaughnessy, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p36-41.

Full Scale Side-By-Side Testing of BNR Technologism-cry, Amarjit Sokhey and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p30-35.

Model to Design Diffused Aeration System for BNR.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Pierce Linaweaver, ed., 1992), p18-23.

Modeling and Pilot-Scale Experimental Verification for Predenitrification Process, J. Hamilton, R. Jain, P. Antoniou, S. A. Svoronos, B. Koopman and G. Lyberatos, E. Jan. Feb. 92, p38-55.

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

Operational Strategies for Predenitrification Process, R. Jain, G. Lyberatos, S. A. Svoronos and B. Koopman, EE Jan. Feb. 92, p56-67.

Performance of a Denitrification System—Western

EE Jan./Feb. 92, p56-67.

Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwilo and Rudy S. Chow, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p12-17.

Pilot-scale Anaerobic Biological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapii Sabharwal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450.

Process Design for Bioremediation of Nitrogen-Species

r. PIETCE LINAWEAVER, ed., 1992), p445-450.
Process Design for Bioremediation of Nitrogen-Species Contamination of Soils and Groundwater, Paul D. Turpin, J. Michael Henson and Steven L. Martin, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.

Airfield Pavement Creep Failure Investigation, John C. Potter, CF Aug. 92, p177-184.

Compaction Grout, 1992, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p275-287.

Compaction of Granular Soils—Remarks on Quality Control, Michele Jamiolkowski and Erio Pasqualini, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p902-914.

Densification of Loose Sands by Deep Blasting, Ulrich La Fosse and Theodore von Rosenvinge, IV, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed. Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p954-968.

p. 193-298.

resisfication/Creep Behavior of Experimental Glass-Ceramic Waste Forms for Immobilization of High-Level Calcined Waste at the Idaho Chemical Processing Plant, Krishna Vinjamuri, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p. 300-303.

1992, p.300-303.
Design and Performance of Two Port Silos on Improved Ground, M. U. Ergun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.842-854.
Dynamic Compaction Analysis, Y. K. Chow, D. M. Yong, K. Y. Yong and S. L. Lee, GT Aug. 92, p.1141-1157.

Dynamic Compaction Engineering Considerations, Robert G. Lukas, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p940-953.

Dynamic Compaction of Nuclear Waste, Cliff Schex-nayder and Robert G. Lukas, CE Mar. 92, p64-65. Earthquake Support Grouting in Sands, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888.

Micromechanical Model to Predict Sand Densification by Cyclic Straining, Ricardo De Petrakis, EM Feb. 90, p288-308. Dobry and Emma

A Monumental Task, Victor Omelchenko, Thad Bergling, David J. Oleynik and Satish B. Shah, CE June 92, p60-Postdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115.

Time-Dependent Cone Penetration Resistance Due to Blasting, Wayne A. Charlie, Mutabihirwa F. J. Rweby-ogo and Donald O. Doehring, GT Aug. 92, p1200-1215.

The Use of Dynamic Compaction to Consolidate Nuclear Waste, Cliff Schexnayder and Robert G. Lukas, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., den, ed., Robert C 1992), p1311-1323.

The Use of Vibro Systems in Seismic Design, Roberto A. López and Robert F. Hayden, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1433-1445.

An Acoustic Impedance Method for Subbottom Material Characterization, Richard G. McGee and Robert F. Ballard, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1030-1035.

ensity Changes During Undrained Loading— Membrane Compliance, Mark D. Evans, GT Dec. 92, p1924-1936. Density

The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79.
Estimating Thaw-Strain Settlement of Frozen Fill, G. Scott Crowther, CR Dec. 92, p152-159.

Improvement of Flow in Final Settling Tanks, Ulrich Bretscher, Peter Krebs and Willi H. Hager, EE May/ June 92, p307-321.

Quantitative Stereology of Concrete Microcracking, Kim D. Basham, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p123-126.

Water Content-Density Criteria for Compacted Soil Liners, David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830.

Density currents

Density Currents and Shear-Induced Flocculation in Sed-imentation Tanks, D. A. Lyn, A. I. Stamou and W. Rodi, HY June 92, p849-867.

Density Currents Entering Lakes and Reservoirs, Vahid Alavian, Gerhard H. Jirka, Richard A. Denton, Marc C. Johnson and Heinz G. Stefan, HY Nov. 92, p1464-

Influences of Density on Circular Clarifiers with Baffles, Siping Zhou, J. A. McCorquodale and Z. Vitasovic, EE Nov./Dec. 92, p829-847.

Reservoir Sedimentation. II: Reservoir Desiltation and Long-Term Storage Capacity, Jiahua Fan and Gregory L. Morris, HY Mar. 92, p370-384.

Use of Density Current to Modify Thermal Structure of TVA Reservoirs, Vahid Alavian and Pete Ostrowski, Jr., HY May 92, p688-706.

Density functions

Density Interconservations of Some Importance Sampling Techniques in Structural Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p108-111.

Density measurement

Variability in Compaction Control, Iraj Noorany, GT July 90, p1132-1136.

Density stratification
Data Set for Verification of 3-D Free-Surface Hydrodynamic Models, Carquinez Strait, California, P. Esmith, R. N. Oltmann and M. R. Simpson, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p430-435.

Density Currents Entering Lakes and Reservoirs, Vahid Alavian, Gerhard H. Jirka, Richard A. Denton, Marc C. Johnson and Heinz G. Stefan, HY Nov. 92, p1464-

Erosion of a Thin Lutocline Under Homogeneous Turbu-lence, Panagiotis D. Scarlatos, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p263-268.

Modeling of Rectangular Settling Tanks, Siping Zhou and John A. McCorquodale, HY Oct. 92, p1391-1405.

Deposition

Analysis of Dredged Material Deposition Patterns, Eric E. Nelson and Billy H. Johnson, (Ports '92, David Torseth, ed., 1992), p470-479.

Depositions and Trial Testimony, A Positive Experience? Robert W. Day, El Apr. 92, p129-131.

Depth
Deflections of Beams with Varying Roctangular Cross
Section, Filippo Romano and Gaetano Zingone, EM
Oct. 92, p2128-2134.
Oct. 92, policies of Complex Channel Sec-

Normal-Depth Calculations in Complex Channel Sections, Edward D. Shirley and Vicente L. Lopes, IR Mar/Apr. 91, p220-232.

Brackish Groundwater Desalting in Southern California:
A Summary of Case Studies, Lee A. Jacobi, Julius Y.
Ma and William R. Everest, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p387-592.
The Desalination Situation, John Prendergas, CE Aug.

72, page 172, pa p242-247.

p242-247.
State of the Art in Open-Cycle Ocean Thermal Energy Conversion, Michel Gauthier, Jean Marvaldi and Federica Zangrando, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p109-151.
Transportation of Demineralized Water: Case Study, Ali A. Quraishi and Muhammad S. Al-Amry, TE July/Aug. 92, p576-585.

Desalination plants
The Desalination Situation, John Prendergast, CE Aug.
92, p42-44.

Modeling Desiccating Behavior of Mine Tailings, Gareth E. Swarbrick and Robin Fell, GT Apr. 92, p540-557.

Design
The 1984 Major Rehab of the Muskegon Harbor, MI South Breakwater: An Extreme Example of Misguided Design of a Stone Structure, Charles N. Johnson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p238-253.

Achievements Within the International INTRAVAL Project, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1414-1420.

dioactive Waste Management Program Committee, 1992), pl414-1420. Actinide Recycle and Waste Management, Marion L. Thompson and Ira N. Taylor, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl368-1372. Adhesives and Structural Plastics, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571. Advanced Structures in Very Deep Water, Richard J. Seymour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p548-952. Advances in Ground Operations for the Next Generation Space Launch Vehicle Programs, Mark Moeller and Shelly Ewing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p157-1566. Advancing Anchorage Technology, Stuart Littlejohn, CE July 92, p61-64. Advantages of Installing Influent Fine Screens at a Large Wastewater Treatment Plant, George G. Balog, Dave L. Montgomery, Amarjit Sokhey, Manu A. Patel and Norman R. Prima, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p287-290.

Agricultural Drains and Safety of Dams, James M. Verzuh and Glen D. Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p51-56.

Ted Engman, ed., 1992), p51-56.
The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257.
Alternative Study for the Breakwater and Fishing Pier Rehabilitation at Playland Park, Rye, New York, David W. Yang, Michael J. McCarthy, Edward J. Schmeltz, Joseph Bonasia and Ralph Butler, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p632-645.

ed., 1992), po.32-643.
An Analysis of an Inflatable Module for Planetary Surfaces, Paul S. Nowak, Willy Z. Sadeh and Marvin E. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p78-88.

Analysis of Soil-Air Permeability and Saturated Hydrau-lic Conductivity for Remedial System Design, Hamid G. Bojd and B. V. Nanjundeswar, (Environmental En-gineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p321-326.

The Application of Open System Architecture to Plane-tary Surface Systems, D. A. Petri, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p469-482.

and Russell J. Miller, Cu., 1921, p. pool - 34. Applications of Performance Assessment in Support of the Exploratory Studies Facility (ESF) Design, M. E. Fewell, S. R. Sobolik, J. H. Gauthier, L. E. Shephard and L. S. Costin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670.

ASME Pressure Vessel Code Application to Nuclear Waste Container Design, Mohamed B. Trabia and Mark Kiley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1244-1252.

ssessing the Reliability of the Water Supply to a Closed Basin Wetlands, John C. Tracy and James K. Koellikov (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p445–450.

mad Karamouz, ed., 1992), p445-450.

Assessment of Impacts Associated with Alternate Cooling System Designs for an Electric Power Station, Steven H. Wolf, James D. Bowen, Donald P. Galya and Frank S. Smith, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231.

Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. L. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

Axial and Free-Bending Analysis of Spiral Strands Made Simple, Mohammed Raoof and Vu Ping Huang, EM Dec. 92, p2333-2351.

Barbers Point Harbor: A Unique Solution for Port Un-

Dec. 92, p2335-2351.

Barbers Point Harbor: A Unique Solution for Port Upgrade, Michael J. Briggs and Eivind Bratteland, (Ports '92, David Torseth, ed., 1992), p777-790.

Basic Planning and Design of a Water Utility Information System, Chun-Hou Orr, Bryan Coulbeck, Sergio T. Coelho and Helena Alegre, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 9460-345.

Basa Bidas Anne Arundel County, Maryland Offshore

Bay Ridge, Anne Arundel County, Maryland Offshore Breakwater and Beach Fill Design, Edward T. Fulford and Kenneth M. Usab, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p205-220. Behaviour of Prestressed Concrete End Blocks, T. J. Ibell and C. J. Burgoyne, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p135-

Beneficiation and Comminution Circuit for the Produc-tion of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1139-1149.

Beyond GIS: The Integrated Spatial Information System, Lania Rivamonte, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p825-832.

Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A levans and Robert Blama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-355.

Bracing Requirements of Plane Frames, Shyi-Lin Lee and P. K. Basu, ST June 92, p1527-1546.

P. R. Basu, S.J. June 94., p152:1-1340.

Bridge Pier Scour with Debris Accumulation, Bruce W. Melville and D. M. Dongol, HY Sept. 92, p1306-1310.

Building a Pipeline—Not a "Flow Through" Process, Roddy Rogers, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p591-

Cargo Transport to the Lunar Surface Using a Three Rotor Sling, Brian Tillotson, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1010-1021.

auses of Quality Deviations in Design and Construc-tion, James L. Burati, Jr., Jodi J. Farrington and Wil-liam B. Ledbetter, CO Mar. 92, p34-49.

The Challenge of Constraining Mass for Planetary Construction, John F. Connolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p350-356

Civil Engineering Capstone Design Course, Donald A. Andersen, El July 92, p279-283.

Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, 0-87262-866-3, 1100pp.

Codification of Design Load Criteria Subject to Modeling Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007. Column Design in Steel Frames under Gravity Loads, Oscar de Buen, ST Oct. 92, p2928-2935.

Oscar de Buen, ST Oct. 92, p2928-2935.

A Comparison of a New Generation of Spent Fuel Cask Designs with Current Cask Design Characteristics, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1839-1843.

Comparison of ARS-Type Grade Control Model Testing and Prototype Response, C. Watson, N. Raphelt, P. Combs and S. Abt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p213-

Comparison of Model and Field Results for Barbers Point Harbor, Michael J. Briggs, Linda S. Lillycrop and David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p387-399.

Steven A. Hughes, ed., 1992), p387-399.
Computer Iterative Technique for Soil-Structure Interaction, Rusk Masih, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry. Goodno, ed. and Jeff R. Wright, ed., 1992), p418-425.
Conceptual Design of a Monitored Retrievable Storage Cask Employing Yucca Mountain Containers, C. S. Erwin, D. R. Jackson, J. R. Oliver, M. S. Aljohani and D. B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Theorems, 1992), p2235-2240.
Conceptual Design of Modules for a Lunar Base. Edward

Conceptual Design of Modules for a Lunar Base, Edward R. Haninger and Philip J. Richter, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

p100-111.

Constant Hole-Spacing Trail Tubes, S. T. Chu and H. M. Bagherzadeh, IR Jan./Feb. 92, p166-178.

Construction Automation Work Classification, Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p500-505.

Construction of a Far-Term (2020+AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Montoya and Ann Campbell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p427-440. Container Terminal Gates Flexible Design for a Dynamic Environment, Larry Nye, (Ports '92, David Torseth, ed., 1992), p912-925.

Controlling Pulsed Incompressible Flow, Richard Ian Stessel, EY Apr. 92, p1-17.

Cost and Quality Management, Richard Duttenhoeffer, ME Apr. 92, p167-175.

Coupled Heat and Moisture Transport Model for Underground Climate Prediction, G. Danko and P. Mousset-Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p790-798.

Critical Depth Relations for Flow Measurement Design, A. J. Clemmens and M. G. Bos, IR July/Aug. 92, p640-

644.
Critical Stresses in Pintle, Weldment and Top Head of Nuclear Waste Container, Samaan G. Ladkany and Brett R. Kniss, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1253-1260.
Criticality Safety and Shielding Design Issues in the Development of a High-Capacity Cask for Truck Transport, Jack K. Boshoven, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2156-2160.
Criticality Safety and Shielding Design Issues Related to Transport Cask Design, Alan H. Wells, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2151-2155.

waste Man p2151-2155. Decision

Decision Analysis of an Exploratory Studies Facility, M. W. Merkhofer and P. Gnirk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p650-656.

p650-656.

Decision Support System for Multiobjective Service Route Design, Jin-Yuan Wang and Jeff R. Wright, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

Denver International Airport Fabric Roof Design, James H. Bradburn, Horst Berger and Lee Erdman, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p192-198.

Design and Construction Considerations for Lunar Outpost, H. Benaroya and M. Ettouney, AS July 92, p261-273.

Design and Construction of Shinpscock Inter New York

273.
Design and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p534-570.
Design and Construction of Two Major Experiments at the URL. P. M. Thompson, B. H. Kjartanson and R. S. Read, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee 1992) p. 1082, 1089

High Level Radioactive Waste Management Frogram Committee, 1992), p1082-1089.

Design and Construction of Waterfront Facilities at U.S. Navy Homeport at Ingleside, Texas, Edward H. Stehmeyer, Jr., David W. Mock and Donald L. Goddeau, (Forts '92, David Torseth, ed., 1992), p644-656.

Design and Licensing of the VSC Dry Fuel Storage System, Art J. McSherry, John V. Massey and Boris A. Chechelnisky, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), n1216-1220. Program Committee, 1992), p1216-1220.

Program Committee, 1992, 1912-16-1220.

Sign and Maintenance Factors Affecting Application Uniformity of Low Pressure Center-Pivot Irrigation Systems, Brian K. Briggs, K. James Fornstrom and Larry Pochop, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman,

ry Pochop, (Irrigation and Drainage: Saving a Threat-ende Resource—In Search of Solutions, Ted Engman, ed., 1992), p.257-262.

Design and Maintenance of Rural Water Supply Systems for Improved Performance, Paul D. Robillard and Ronald L. Droste, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.523-528.

Design and Operation of On-Farm Irrigation Ponds, Bri-jesh Kumar Mehta and Akira Goto, IR Sept./Oct. 92,

po39-6/3. Design and Performance of Bath County Upper Dam and Reservoir Slopes, K. L. Wong, D. E. Kleiner, A. M. Wood, M. C. Geary and R. G. Oechsel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p371-386

The Design and Use of Flow-Through Hold Pads, Doug-las F. Goldberg, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p1-6

Design Cable-stayed Bridge for Cost Effectiveness and Safety, Jih-Jiang Chyu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992),

Design Charts for Timber Beam-Columns, Ramon Riba-Ramirez and Mehrdad Soltani, ST Feb. 92, p596-602.

Ramirez and mentrada Soutani, SI Feb. 92, p396-002.

Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p774-785.

Design Considerations for Using Adhesives in Shear Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

Design, Construction, and Performance of a Baffled Breakwater, Jonathan W. Lott and Walter E. Hurti-enne, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p487-502.

Design Discharge for Urban Stormwater Drainage, A. Osman Akan, (Hydraulie Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p713-718. Design Firms Feel Economic Pinch, But Effect is Uneven, NE Jan. 92, p2.

Design Guidelines for a Sedimentation Control System at Open Channel Diversions, Vincent S. Neary and A. Jacob Odgaard, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p198-

Design Implications of Measured Pressures and Strains in Silos, Geoffrey E. Blight, ST Oct. 92, p2729-2742.

Silos, Geoffrey E. Bilght, ST Oct. 92, p2129-2142.
Design Management and Stress Analysis of a Circular Rock Tunnel and Emplacement Holes for Storage of Spent Nuclear Fuel, Nadia Kandalaft-Ladkany and Richard V. Wyman, (High Level Radioactive Waster Management, High Level Radioactive Waster Management, High Level Radioactive Waster Management Program Committee, 1992), p2260-2266.

A Design Manual for Coastal Fluidization Systems, Richard N. Weisman, Gerard P. Lennon and James E. Clausner, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p862-878.

Design Method for Frozen-Soil Retaining Wall, Sweanum Soo and B. B. Muvdi, CR June 92, p73-89.

A Design Method for Reinforced Clay Embankments on Soft Foundations, Glen A. Roycroft, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1481-

The Design of a Reclamation Scheme by Preloading, S. Ossama Mazen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), pl 019-1030.

Design of a Support and Foundation for a Large Lunar Optical Telescope, Koon Meng Chua, Stewart W. Johnson and R. Sahu, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992b, p1952-1963.

and Russell J. Miller, ed., 1972, p. 1972, 1975.
Design of a Three-Dimensional Site-Scale Model for the
Unsaturated Zone at Yucca Mountain, Nevada, C. S.
Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L.
Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A.
Rautman, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Fligh Level Radioactive Waste Management Program Committee, 1992), p263-271.

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1073 1087.

Design of Floating Stone Columns in Hydraulic Fill, Ray-mond A. DeStephen, David W. Kozera and Frank J. Swekosky, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p829-841.

Design of Geosynthetic-Reinforced Soil Structures, Kh. Farrag and I. Juran, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1188-1200.

Design of Irrigation Distribution System, Steve Robertson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p462-467.

Design of Landfill Drainage Systems, Bruce M. McEnroe, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p208-213.

The Design of Landfill Slopes, Ibraheem Alshunnar, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 232-1243.

Design of Latticed Steel Transmission Structures (ANSI/ ASCE 10-90) (St No. 90-010), Standards Committee for Design of Steel Transmission Towers, American Socie-ty of Civil Engineers, (Edwin H. Gaylord, chmn.), 1992, 0-87262-858-2, 64pp.

Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (Ports '92, David Torseth, ed., 1992), p275-287.

ed., 1992), p275-287.

Design of Municipal Wastewater Treatment Plants, 2 vols (M&R No. 76), Joint Task Force of the American Society of Civil Engineers and the Water Environment Federation, (Joseph F. Lagnese, chmm.), 1991, 0-87262-834-5, 1632pp.

Design of Notched Wood Beams, Greg C. Foliente and Thomas E. McLain, ST Sept. 92, p2407-2420.

Design of Piles in Permafrost Under Combined Lateral and Axial Load, A. Foriero and B. Ladanyi, CR Sept. 91, p82-132.

Design of Protective Dunes at Dam Neck, Virginia, John R. Headland, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p251-267.

Design of RC Sections with Generic Shape under Biaxial Bending, Andrea Dall'Asta and Luigino Dezi, ST Apr. 92, p1138-1143.

Design of Tension Leg Platforms: A Knowledge Based Approach, John M. Niedzwecki and Oriol R. Rijken, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p288-293.

Design of Trapezoidal Expansive Transitions, Prabhata K. Swamee and Bharat C. Basak, IR Jan./Feb. 92, p61-

Design Procedures for Effluent Discharge to Estuaries During Ebb Tide, Tony Webb and Rodger B. Tomlin-son, EE May/June 92, p338-362.

A Design Theory for Compaction Grouting, John H. Schmertmann and James F. Henry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p215-

The Design/Build Advisor System: Integration of Data-bases with a Knowledge-Based System, Annette L. Stumpf and Thomas R. Napier, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p950-958.

Design-Build Goes Public, James Denning, CE July 92, p76-79.

Designing Articulated Vehicles for Low-Speed Maneuver-ability, H. F. Chen and S. A. Velinsky, TE Sept./Oct. 92, p711-728.

John A. Bischoff, Stephen J. Klein and Thomas A. Lang. CE Jan. 92, p64-67.
 Determination of Interfacial Shear and Normal Stresses in Fiber Pull-Out, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1004-1007.

NIGLEWECKI, Ed., 1992), p1004-1007.
Development of Functional Requirements for a Monitored Retrievable Storage Installation, M. A. Duffy, T. A. Mozhi, P. N. Kumar and W. A. Lemeshewsky, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1867-1874.

Development Status of the GA-4 and GA-9 Casks, Robert M. Grenier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1832-1838.

Draft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Torseth, ed., 1992), p939-1000.

seth, ed., 1992), p939-1000.

Draft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwaters, ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Ennio DeCurtis, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Douglas Sethness, Jr.), (Ports '92, David Torseth, ed., 1992), p1001-1069.

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE Ports and Harbors Task Committee (Paper Prepared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster), (Ports '92, David Torseth, ed., 1992), p1070-1151.

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels, J. S. Grant, P. M. Boocock and C. J. Ealing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2227-2234.

A Dual Level Methodology for Stormwater Detention Basin Design, Donald V. Chase and Lindell E. Ormsbee, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992, p849-854.

Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992, O-87262-863-9, 288pp.

Dynamic Design of Deepwater Bottom-Founded Towers, Denby Grey Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p850-889.

Economical IRFD Composite-Beam Design from HESCO, John Cook and Roger Blais, CC May 92, p1-3,7-11.

5,-11. Effect of Jetty Configuration on Wave Conditions and Dredge Quantities at Green Harbor, MA, Cheryl E. Burke, Joan Pope and Mary A. Cialone, (Coastal Engineering Fractice '92, Steven A. Hughes, ed., 1992).

Burke, Joan Pope and Mary A. Cialone, (Coastal Engineering Fractice '92, Steven A. Hughes, ed., 1992), p462-478.

Effect of Micro-parameters on the Macroscopic Behaviour of Ductile Fiber Reinforced Brittle Matrix Composites, Christopher K. Y. Leung and Jeffrey Chi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p744-747.

Effect of Strain Rate on Cold-Formed Steel Stub Coumns, M. Kassar, C. L. Pan and W. W. Yu, ST Nov. 92, p3151-3168.

Empirical Simulation of Future Hurricane Storm Histo-Empirical Simulation of Future Hurricane Storm Histories as a Tool in Engineering and Economic Analysis, Leon Borgman, Martin Miller, Lee Butler and Robin Reinhard, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p42-65.
Engineering Aspects of Wetland Design, Donald F. Hayes and Michael R. Palermo, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 2344-346.

Seatre of Southorn, Montamman Karambuz, ed., 1972), p344-349.

Environmental Impact Analysis of Coastal Projects, Jon T. Moore, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p952-957.

EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1656-1667.

Evolution of the Space Station Freedom Module Pattern, Marston Gould, James Hendershot and Rudy Saucillo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p975-986.

Experience with NRC Licensing of a Dual Purpose Cask, Ivan Stuart, Todd Lesser and Marvin Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1231-1235.

1992), p1231-1235

Gloactive Waste Management Program Committee, 1992), pl 231-1235.

Experimental Validation of a Probabilistic Fracture Mechanics Model, Mircea Grigoriu and A. R. Ingraffea, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p443-446.

An Expert System for Impeller Mechanical Design and Analysis, Wen Jeng Chen and Hong-Tsung Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p936-939.

Extended-Life Nuclear Waste Package Utilizing Redundant Corrosion/Containment Barners, F. E. Goodwin and R. E. Westerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1681-1686.

Plexural Tensile Strength of Partially Grouted Concrete Masonry, Ahmad A. Hamid, Omar A. Elnawawy and Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393.

Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

Flow and Energy Dissipation Over Stepped Gabion Weirs, L. Peyras, P. Royet and G. Degoutte, HY May 92, p707-717.

For Building Designers, Déjà Vu Can be Costly, CE Apr. 92, p19-20.

From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314.

F. Pierce Linaweaver, ed., 1992.), p.309-314.
Geomorphic and Hydraulic Factors Affecting Stream Stability at New York Thruway Bridges, Sufian A. Khondker, Keith E. Giles, Carl J. Montana and Mark A. Hixson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p912-918.

Geosynthetic Strength—Ultimate and Serviceability Limit State Design, R. J. Fannin and S. Hermann, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., (1992), p1411-1426.

1992), p1411-1426.
Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchors, O. Chaallal and B. Benmokrane, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p606-617.
Ground Anchorage Technology—A Forward Look, Stuart Littlejohn, (Grouting, Soil Improvement and Geosymhetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p39-62.
Grouting Techniques for Facayation Support Joseph P.

Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-261.

Guidance for Engineering-Design-Class Lectures on Eth-ics, Richard H. McCuen, El July 90, p251-257.

High-Level Waste Package Retrievability, Thomas W. Doering and David Stahl, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p362-365.

Honolulu Harbor Ship Traffic Simulation and Animation Study, James R. Walker, Vedat Demirel and Michael C. Leue, (Ports '92, David Torseth, ed., 1992), p868-

Human Error in Complex Systems, Douglas H. Harris, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1527-1533.

Human Factors Programs for High-Level Radioactive Waste Handling Systems, Daniel J. Pond, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1547-1554.

h134-1354.
Human Habitat Design for the Space Exploration Initiative, Robert Boyd, Scott Geels, Benton C. Clark and Carolyn Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p25-33.

and Australia (1942), p.25-33.

Impact of HLW Thermal Output on Repository Design,
J. L. Girotto, L. Chaudon and J. M. Hoorelbeke, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p.779-783.

Impacts of Transportation Regulations on Spent Fuel and High Level Waste Cask Design, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p201-203.

Implications of Design Uncertainty in Benefit-Cost Anal-ysis, Anand Prakash, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p120-

Improving Stone Placement Specifications, David D. Sanders, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p58-63.

In Situ Testing Program at the Waste Isolation Pilot Plant, T. M. Schultheis, High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1090-1091.

Incorporating Corrosion in Reliability-Based Design of Anchored Bulkheads, M. J. S. Roth, T. C. Sandford and H. J. Dagher, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p160-163.

Inelastic Amplification Factor for Design of Steel Beam-Columns, I. S. Sohal and N. A. Syed, ST July 92, Columns, I. p1822-1839

Influence of ADAS Element Parameters on Building Seismic Response, Chuan Xia and Robert D. Hanson, ST July 92, p1903-1918.

July 92, p1903-1918.

Inner Harbor Wave Conditions due to Breakwater Overtopping. Fredric Raichlen, Jack C. Cox and Jerald D. Ramsden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), 9425-446.

Innovative Intake Design for Raritan River, Paul Y. Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p220-225.

Instructional Modules for Tunnel Design and Construction, Charles W. Schwartz, Herbert H. Einstein and Guillermo F. Salazar, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-375.

An Integrated Human/Plant Metabolic Mass Balance

p368-375.

An Integrated Human/Plant Metabolic Mass Balance Model, A. B. Thompson, J. R. Schulz and C. G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p177-1788.

Integration of AM/FM/GIS with MODELLING/DESIGN on Large Utility PC Network, J. Darrell Bakken and Charline M. Avey, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

p703-711. Internal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p23-60-23-66. International Harmonization of Reliability-Based Timber Engineering Design Codes, Jozsef Bodig, Michael Caldwell and Ronald W. Anthony, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-86. Intra Nena Cava Balloon Pumping, Tip-Kan Hung, Intra Nena Cava Balloon Pumping, Tip-Kan Hung.

tra Vena Cava Balloon Pumping, Tin-Kan Hung, Thomas E. Natan, Hua-qiang Li, Frank R. Walters and Brack G. Hattler, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p709-712.

Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Far-rag and Victor Elias, GT Jan. 90, p54-72.

rag and Victor Elas, GT Jan. 90, p34-72.

A Knowledge Based System with Uncertainty for the Soil, Cherif Boulemia, Daniel Boissier and Jihad Al-Hajiar, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p365-368.

Knowledge-Based Simulation of Construction Plans, Abdalla M. Odeh, Iris D. Tommeiein and Robert I. Carr,

(Computing in Civil Engineering and Geographic Info Jeff R. Wright, ed., 1992), p1042-1049.

Land Reclamation Design for the Port of Los Angeles' 2020 Plan, J. Warwar and R. Wittkop, (Ports' 92, David Torseth, ed., 1992), p577-590.

LASVIG 1078EII, ed., 1992), p.571-590.

LASSAP, Stress and Settlement Analysis and Design Program, Clarence Jiang, K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p426-433.

am, party J. Goodno, ed. and Jetl R. Wright, ed., 1992), p426-433.

Laupahoehoe Harbor Planning, Design, & Construction, David A. Lau, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p320-336.

Levee/Floodwall Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808.

LAC: A Closed Ecosystem Research Facility, Derek E. Shipley, Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1765-1776.

Load Duration and System Effects in LRFD for Wood Construction, David V. Rosowsky and Bruce R. Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p78-81.

Local Scour at Bridge Abutments, B. W. Melville, HY Apr. 92, p615-631.

Lunar Base Requirements for Human Habitability, Gary T. Moore, Kerry L. Paruleski, Janis Huebner-Moths, Joseph P. Fieber and Patrick J. Rebbolz, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p224-239.

Lunar Habitats—Places for People, Robert Peifer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p183-188.

Lunar Surface Mine Feasibility Study, Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992.), p1092-1103.

Lunar Transit Telescope Lander Design, Husam A.

Millet, 60., 1922.), p1092-1103. Lunar Transit Telescope Lander Design, Husam A. Omar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1880-1889.

Management of Design, Richard L. Haury, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1922), p. 170-183.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p. 163-175.

Managing Large Complex Projects, William B. Derrick-son, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1751-1757.

Mars Basing, Brent Sherwood, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1964-1975.

p)1904-1973. A Methodology for Development of Spaced-Based Assembly Operations, Scott Peppin, Jeff Morrow and Joel Loudenslager, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1035-1047.

Microcomputer Analysis of Guyed Towers as Lattices, Raja R. A. Issa and R. Richard Avent, ST Apr. 91, p1238-1256.

The MIDUSS Touch, Ed Chamberland, CC June 92,

The MIDUSS Touch, Ed Chamberhand, pl. 10-14.

Minimum Weight Design of Structural Topologies, U. Kirsch and B. H. V. Topping, ST July 92, p1770-1785.

Minneapolis/St. Paul International (MSP) Part 150 Implementation Design Overview, Steven J. Vecchi, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p32-40.

Mix Design for Flowable Fly-Ash Backfill Material, R. Janardhanam, F. Burns and R. D. Peindl, MT Aug. 92, p3252-263.

Janardhanam, F. Burns and R. D. Peindl, MT Aug. 92, p252-263.

Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, M. L. Spaulding, K. Jayko, T. Isaji, E. L. Anderson, E. Howiett, J. C. Swanson, D. Mendelsohn and S. Puckett, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175.

Model Tests for Expansion of Anaheim Bay Naval Harbor, Robert R. Bottin, Jr. and Dan Muslin, (Ports '92, David Torseth, ed., 1992), p768-776.

Modeling Desiccating Behavior of Mine Tailings, Gareth E. Swarbrick and Robin Fell, GT Apr. 92, p540-557.

Modeling Stormwater Basin Effects, Robert G. Traver and Ronald A. Chadderton, (Water Resources Planning and Management. Saving a Threatened Resource—In

and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p855-860.

Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersatura-tion, Perry L. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p311-316.

p311-316.

Moisture Content and Reliability-Based Design for Wood Members, David V. Rosowsky and Kenneth J. Fridley, ST Dec. 92, p3466-3472.

The Mother of All Resilient Structures: Fixed-Base Tower in 3000-Foot Water and Some Outstanding Issues, Peter W. Marshall, Susan L. Smolinski and Denby G. Morrison, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p258-272.

A Multi-objective Criteria Analysis for Alternative Route Planning, Amy Zlotsky, Michael P. Gutzmer and Guy M. Evasco, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p474-479.

A Multiple Disk Centrifugal Pump as an Artifical Ventricle, Gerald E. Miller and Amrita Sidhu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p976-979.
National Endowment of the Arts Honors Engineering Projects, CE May 92, p16-17.
Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.
The Need for a True System Approach for High-Level Waste Management Systems Engineering Recommendations from the U.S. Nuclear Waste Technical Review Board, Dennis L. Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p822-826.
A New Concrete Armor Unit for Breakwaters: The "Beta Block", José María Berenguer, Vicente S. Naverac and José Manuel de la Peña, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p667-678.
A New Design Chart for Reinforced Embankments, M. Soubra, C. Coulet and D. Rakotondramanitra, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1163-1174.
Nitrogen Removal at Baltimore's Back River WWTP, Robert J. Andryszak, Amariit S. Sokhev. Jaswant S.

den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl163-1174.

Nitrogen Removal at Baltimore's Back River WWTP, Robert J. Andryszak, Amarjit S. Sokhey, Jaswant S. Dhupar and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p617-622.

Nonlinear Wave Runup on Large Circular Cylinders, David L. Kriebel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p173-187.

Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou, Nikolaos Plevris and Nikola Deskovic, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717.

A Novel Aerobrake Design for a Mars Lander, John E. Crawford, Ralph G. Colbert and Manual I. Cruz, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p862-872.

Object Oriented Spacecraft Architecture, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2328-2337.

OCEA, American-Style, Paul Tarricone, CE July 92, p57-60.

Offshore Challenge, Gordon H. Moore and Juan J.

Miller, ed., 1923, p. 23.62-23.

OCEA, American-Style, Paul Tarricone, CE July 92, p57-60.

Offshore Challenge, Gordon H. Moore and Juan J. Campo, CE Oct. 92, p48-51.

Offshore Pile System Reliability, Wilson H. Tang and Robert B. Gilbert, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p228-231.

On Deciding Between the Use of Engineering Standards and Risk Analysis, George W. Annandale, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p219-235.

On the Influence of Seismically Induced Residual Forces on Bridge Abutment Design, Raj Siddharthan and Mahmoud El-Gamal, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p51-54.

p51-54.

p51-54.
On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, Rick Vargo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p885-896.
OUTFL—A Spreadsheet for Design of Adequate Storm Drainage Outfalls, Oner Yucel and Edward L. Lowman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p707-712.
Outlook for Design Services Flat over Short Term, NE Mars 92 - 82

Mar. 92, p2

Overtopping Protection Alternatives for Dams, Noel R. Oswalt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1210-1215.

ed. and Nani G. Bhowmik, ed., 1992), p1210-1213.
Overview of Design and Construction in the Urban Environment, Thomas R. Kuesel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p1-5.
Owner Involvement in Construction Projects in Saudi Arabia, Abdulaziz A. Bubshait and Abdulaziz A. Al-Musaid, ME Apr. 92, p176-185.

Pier and Wharf for U.S. Navy Homeport, Everett, Arn-finn Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (Ports '92, David Torseth, ed., 1992),

Dan S. Wong, (1971)
p616-629.
Pile Lateral Load Test in the Port of Los Angeles, Matthew F. Hunter, Allen M. Yourman, Gerald M. Diaz
and Hsuch-Hsin Chu, (Ports '92, David Torseth, ed.,

and Hsuch-Hsin Chu, (Ports '92, David Torseth, ed., 1992), p322-335.

Pilot Waste-Stabilization Pond in Tanzania, Michael Yhdego, EE Mar/Apr. 92, p286-296.

Planning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik), (Ports '92, David Torseth, ed., 1992), p937-938.

ed., 1992), p937-938.

Planning and Design Guidelines for Small Craft Harbors—Economics and Finance, ASCE Ports and Harbors Task Committee (Paper Prepared by Lawrence E. Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports '92, David Torseth, ed., 1992), p1152-1183.

Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu A. Patel and Burton D. Sklar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280.

Planning, Assessing and Implementing Pipeline Rehabilitation Options, B. Jay Schrock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741.

Planning, Design and Integration of a Computerized Ter-Planning, Design and Integration of a Computerized Ter-

Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.

Power Sources for Lung Bases Advanced National Computer Systems (Power Sources for Lung Bases Advanced National Computer Systems Pages 1997).

92, David Torseth, ed., 1992), p72-84.
Power Sources for Lunar Bases, Alastair J. W. Mayer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p763-773.
Predicting Tower Guy Pretension Using a Neural Network, Raja R. A. Issa, Desmond Fletcher and Ruth Ann Cade, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1074-1081 1081.

1081.
Preliminary Analysis of Repository Operational Criteria, John P. Hageman, Asadul H. Chowdhury and Jerome R. Pearring, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1067-1073.
Preliminary Design for NATM Tunnel Support in Soil, Eric Leca and G. Wayne Clough, GT Apr. 92, p558-575

Preliminary Investigation of a Lunar 16 Meter Optical Telescope, Walter H. Gerstle, N. N. V. Prasad, Kirk Cessac and Thomas Kratochvil, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2305-2316.

p2305-2316.

PREPS: Analysis of Pipe Supports and Other Structures on the PC-386, Gregory Nakhimovsky and Charles E. Doherty, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p543-550.

Probability of Bridge Failure Due to Pier Scour, P. A. Johnson and B. M. Ayyub, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p503-550. p690-695

p690-695.

Prying and Shear in End-Plate Connection Design, Cameron P. Chasten, Le-Wu Lu and George C. Driscoll, ST May 92, p1295-1311.

Public-Safety Issues in Collapse of L'Ambiance Plaza, Frank J. Heger, CF May 91, p92-112.

Quarry Techniques for Dimensional Breakwater Stone, Stephen N. Stehlik, R. D. Knisely and C. L. Kramer, Churability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p170-184.

pl 10-104.
The Reconstruction of the Morton Street Evacuation and Ventilation Shaft, Daniel M. Hahn, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p91-106.
Re-examination of Vilnen and Other Column Equations, John J. Zahn, ST Oct. 92, p2716-2728.
Reflection in Problem Solving and Design C. I. Khisty.

Reflection in Problem Solving and Design, C. J. Khisty and L. L. Khisty, El July 92, p234-239.

Regulatory Considerations in Design of the Exploratory Studies Facility, Michael W. Parsons and Michael D. Voegele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p671-678.

A Regulatory Perspective on Design and Performance Requirements for Engineered Systems in High-Level Waste, Robert M. Bernero, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p813-821. Reliability of Bolted Wood Connections, John J. Zahn, ST Dec. 92, p3362-3376.

Reliability-Based Design for Feeeze-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9462-475.

Reliability-Based Pier Scour Engineering, Peggy A. Johnson, HY Oct. 92, p1344-1358.

sun, nr Cet. 2c, p1344-1338. Reliability-Based Specification for Engineered Wood Construction, James R. Goodman, Allan G. Burk and David G. Pollock, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p73-77.

Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, R. H. Sues and L. A. Twisdale, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p511-514.

Reliable Design-Wave Force Predictions for Seabed Pipe-lines, Robert A. Grace, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p481-495.

Remaining-Life Consideration in Pavement Overlay Design, Tien F. Fwa, TE Nov./Dec. 91, p585-601.

Replacement of a Deteriorated Steel Sheet Pile Bulkhead, Vincent G. Miller and Vladimir Ostrov, (Ports '92, David Torseth, ed., 1992), p826-835.

Reserve Capacity Design Method (RCDM) for Deepwater Piled Foundations, J. M. E. Audibert, J. L. Mueller and S. R. Bamford, WW Jan./Feb. 92, p32-42.

Residual Strength of Structural Components Subjected to Cyclic Loads, Deric John Oehlers, ST Oct. 92, p2645-2658.

Residual Stress Mitigation Considerations for Waste Package Design and Closure, E. S. Robitz, Jr. and T. W. Doering, High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p377-384.

Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p591-601.

Return of the Master Builders, Jeffrey Beard, CE June 92,

p116. Riprap Design in Marine Terminals, Sandra K. Martin and Stephen T. Maynord, (Ports '92, David Torseth, ed., 1992), p364-375.

Riprap Stability Under Impinging Flow, James R. Leech, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p138.

Robotic Platform May Change Crane Design, CE Oct. 92, p13-14.

Robotics for Radioactive Waste Management in AEA Technology Facilities, S. A. Legg, A. Staples and C. J. H. Watson, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p980-984.

ole of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

The Role of the M&O in the High-Level Civilian Radio-active Waste Management System, Roland L. (Robby) Robertson, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2415-2416.

Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, 0-87262-862-0, 520pp.

Roller Compacted Concrete Mix Design, Stephen Tatro and James K. Hinds, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p323-340.

Rule-Based Representation, Ashim Bose and Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p43-59.

SALSA: A Lunar Submillimeter-Wavelength Array, M. J. Mahoney and K. A. Marsh, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1902-1912. Sandbridge Virginia Oceanfront Seawall Arbitration Hearing; Some Lessons Learned for Coastal Engineering, David R. Basco, Robert A. Dolan and Carter Sinclair, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1003-1020.

Sea Defence System at Herne Bay, England, J. H. de Vroeg, J. van Overeem, A. G. Roberts and M. R. Beck, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p90-103.

Second-Order Inelastic Analysis Methods for Steel-Frame Design, W. S. King, D. W. White and W. F. Chen, ST Feb. 92, p408-428.

Feb. 74, pero-4c. SEI In-Space Operations and Support Challenges, Ronald Caldwell, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1476-1487.

Seismic Survey Considerations in the Planning and Design of Dredging Projects for Marine Terminal Facilities, Charles J. Natale, Jr., Thaddeus A. Nowak, Jr. and Bruce A. Adams, (Ports '92, David Torseth, ed., 1992), p456-469.

ielding and Criticality at the MRS Facility, Kenneth L. Ashe, Robert G. Eble and James R. Hilley, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2056-2061.

Shielding Design of the Ventilated Storage Cask, John H. Kessler, John V. Massey and Henry H. Tran, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2047-2055.

Shipping Cask Development Loaded 4 PWR Fuel Assembles, H. Y. Kang, J. C. Lee and S. G. Ro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992).

plo4-164/.

The SIMBAT Software Package for Stochastic Interpola-tion of Ocean Wave Kinematics as an Aid in the Engi-neering Design of Large Floating Structures, Loo Borgman, David Shields, Robert Zueck and Warren Bartel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p585-066.

Simulified Design of Multi-Stage Outfalls for Urban De-

riuspein, ed., 1992, p.585-00.
Simplified Design of Multi-Stage Outfalls for Urban Detention Basins, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p861-866.

Natamouz, ed., 1992), p861-866.

Skull Object Space: Essential Knowledge Typologies for Proprietary Brand Name or Equal Specifications Interpretation, Jesus M. De La Garza and Gaye A. Oralkan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p614-622.

Slope Stabilization Using In-Situ Earth Reinforcements, Seth L. Pearlman, Bradley D. Campbell and James L. Withiam, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1333-1348.

Boulanger, ed., 1992), p1333-1346.
The Small Mars Rover, A. L. Kemurdjian and V. V. Gromov, (Engineering, Construction, and Operations in
Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p390-397.

Nusci J. Miller, ed., 1992), p.390-397.
Some Aspects Concerning the Design of High Level
Waste Vitrification and Storage Facilities, V. A. Kurnosov, M. V. Strakhov, V. T. Sorokin and A. E. Kozlov,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p.2387-2394.

South Jetty Scour Hole Stabilization, Ocean City, Maryland, Gregory P. Bass and Edward T. Fulford, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p583-597.

Spent Fuel Characteristics Potentially Relevant to Repository Design Assessment, Michael G. Bale and Thomas A. Thornton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p116-121.

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p599-605.

de St. Venant Modelling in the Irrigation Environment, Ehab A. Mesethe and Forrest M. Holly, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1124-1129. Stability Analysis of Reinforced Embankments on Soft Soils, Shenbaga R. Kaniraj and Hasan Abdullah, GT Dec. 92, p1994-1999.

Stability and Performance of Slopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, 0-87262-872-8, 1574pp.

Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-504.

Static Wave Force Procedure for Platform Design, John C. Heideman and Timothy O. Weaver, (Civil Engineer-ing in the Oceans V, Robert T. Hudspeth, ed., 1992), p496-517

Statistical Analysis of Formulas for Breakwater Armor Layer Design, Kalin Nikolov Koev, WW Mar./Apr. 92, p213-219.

Stochastic Finite & Boundary Element Simulations, Gau-tam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123.

p120-123.
Storm-Water Detention Storage Design under Random Pollutant Loading, Rafael Segarra-García and Vasudevan G. Loganathan, WR Sept./Oct. 92, p475-491.
Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.

Strength of Concrete-Filled Thin-Walled Steel Box Col-umns: Experiment, Hanbin Ge and Tsutomu Usami, ST Nov. 92, p3036-3054.

Structural Control Design in the Presence of Time De-lays, P. M. Sain, B. F. Spencer, Jr., M. K. Sain and J. Suhardjo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815.

Subaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744.

Subsurface Characterization and Design of an Ash Land-fill on Varved Clays, Siamac Vaghar, Stanley M. Ben-ben and Markus Walbaum, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803.

Summary of the Exploratory Studies Facility Alternatives Study, L. S. Costin, A. W. Dennis and A. L. Stevens, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p643-649.

mittee, 1992, 1903-0093.
Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, J. B. Case, J. A. Fernandez and J. R. Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2298-2305.

Management Program Committee, 1992), p2298-2305. Swedith High-Level Radioactive Waste Management Issues, Per-Eric Ahlström, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p33-40. System Concepts for a Series of Lunar Optical Telescopes, Max E. Nein, Billy G. Davis and John D. Hilchey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831. Systems Integration of Lunar Campsite Vehicles, Stephen Capps and Theron Ruff, (Engine-ring, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1976-1987. Sture, ed. and Russell J. Miller, ed., 1992, p1976-1987.

Sture, ed. and Russell J. Miller, ed., 1992), p1976-1987. Task Committee Report on Urban Hydrology Chapter, David F. Kibler, A. Osman Akan, Christopher B. Burke, Mark W. Glidden, Gert Aron, Richard H. McCuen and Andrew J. Reese, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p725-728. Tests of Cold-Formed Channels with Local and Distor-tional Buckling, Young B. Kwon and Gregory J. Han-cock, ST July 92, p1786-1803.

Tests on the Application of CAN-Q to Construction Process Modeling, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p199-206.

The Thermal Analysis of BR-100: A Barge/Rail Nuclear Spent Fuel Transportation Container, A. B. Copsey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1848-1854.

mittee, 1992), p1848-1854.

Three Dimensional Visualization in Support of Yucca Mountain Site Characterization Activities, David W. Brickey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p458-461.

Tolerance Limits for Geometric Imperfections in Hyperbolic Cooling Towers, A. Alexandridis and N. J. Gardner, ST Aug. 92, p2082-2100.

Tort Liability: Limiting U.S. Innovation, Harvey M. Bernstein, CE Nov. 92, p6.

Tort Reform and Design Professional, Dennis R. Schapker, El July 90, p258-265.

er, El July 90, p.258-265.
Traffic Impact Study for a Regional Shopping Center at a Basque City. A European View, Mikel Murga, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagni Rouphail, ed. and T. C. Sutaria, ed., 1992), p84-88.
Transport of Multiassembly Sealed Canisters, R. D. Quinn, R. A. Lehnert and J. M. Rosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e2219-22219.

p2219-2226

Unidirected Twined-Strand Composites and Their Uses, Charles E. Kaempen, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p346-559.

ed., 1992), p546-559.

Use of Multimedia in a Sophomore Design Course, Mark L. Valenzuela, Gregory G. Deierlein and Richard N. White, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p229-236.

Utilization of Economical Slopes for Jordanelle Dam, John A. Wilson, William O. Engemoen, Francis G. McLean and Perry J. Hensley, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653-668.

Value Engineering in Coastal Design, Jack C. Cox, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p935-951.

cu., 1972), p933-931.
Verification of an Alluvial Fan Drainage Design Methodology for Transportation Alignments, Syndi J. Flippin and Richard H. French, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p575-580.

1992), p3/5-360. Waste Isolation Pilot Plant Robotic Investigation and Study, T. M. Schultheis and J. R. Walls, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992).

p960-965.

Wastewater under Home Plate, Walter A. Bishop, Jr. and John S. Fraser, CE Oct. 92, p61-63. Wave Front Behavior in Adsorption Reactors, Federico Vagliasindi and David W. Hendricks, EE July/Aug. 92,

p530-550 Weldment Design for RHS Truss Connections. I: Appli-cations, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2784-2803.

West Point Temporary Construction Dock, Chris Sundberg and Jerry Stubbs, (Ports '92, David Torseth, ed., 1992), p723-736.

1972, p. 123-179.
Wetland Restoration and Creation Guidelines for Mitigation, Mary C. Landin, E. A. Dardeau, Jr. and Jerry L. Miller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p439-444.
Wind Loads on Buildings with Sawtooth Roofs, Patrick J. Saathoff and Theodore Stathopoulos, ST Feb. 92, +130-445.

p429-446.

Wind Pressures on Buildings with Mullions, Theodor Stathopoulos and Xiwu Zhu, ST Aug. 90, p2272-2291. Wind-Induced Response of Structurally Asymmetric High-Rise Buildings, M. Saiful Islam, Bruce Elling-wood and Ross B. Corotis, ST Jan. 92, p207-222:

Design criteria

Alluvial Canals Adequacy, Siddig E. Ahmed, IR July/ Aug. 92, p543-554.

ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1056-1070.

Automated Knowledge Acquisition of Preliminary De-sign Concepts, Mary Lou Maher, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p975-982.

Basic Properties of Sand and Gravel Filters (Paper intro-duced by James R. Talbot), James L. Sherard, Lorn R. Dunnigan and James R. Talbot, (Embankment Dums—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p366-383.

156

Singh, ed., 1992), p306-363.

Behavior of Concrete Hollow-Block Masonry Prisms under Axial Compression, T. P. Ganesan and K. Ramamurthy, ST July 92, p1751-1769.

Benefit-Cost Ratios: Failures and Alternatives, Jay R. Lund, WR Jan/Feb. 92, p94-100.

Berkeley Profs Seek Better Fire Protection for Offshore Platforms, NE Feb. 92, p16.

Bin-Wall Failure Caused by Eccentric Discharge of Free-Flowing Grain, R. A. Bucklin, S. A. Thompson and I. J. Ross, ST Nov. 90, p3175-3190.

Calculation of Runoff from Rainfall Using "NURP" Data, Albert H. Halff, Henry M. Halff and Juan S. Ro-driguez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., Resource—In Se 1992), p487-492.

139.21, p487-492.
Case Study: Design of Groundwater Quality Monitoring Systems, Leonard Cilli and Richard Bizub, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p73-79.
Commentary on Proposed Specification for Structural Steel Beams with Web Openings (with Design Example), ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3325-3349.

omments on L'Ambiance Plaza Lifting Collar/ Shearheads, William McGuire, CF May 92, p78-85.

Concrete Surface Treatments—A Selection Guide, P. James Bruner, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482.

Concrete-Face Rockfill Dam: I. Assessment (Paper intro-duced by J. Barry Cooke), James L. Sherard and J. Barry Cooke, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p494-

511. Concrete-Face Rockfill Dam: II. Design (Paper introduced by J. Barry Cooke), J. Barry Cooke and James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p512-532. Confidence Interval for Design Floods with Estimated Skew Coefficient, Jahir Uddin Chowdhury and Jery R. Stedinger, HY July 91, p811-831.

Construction and Performance of Two Large Rockfill Embankments, Gordon M. Matheson and William F. Parent, GT Dec. 89, p1699-1716.

Design and Technology Assessment of Three Lunar Habitat Concepts, Warren D. Hypes, Robert L. Wright and Marston J. Gould, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p249-259.

eu. and Russell J. Miller, ed., 1992), p.249-259.

Design Concepts for a Lunar Concrete Production Facility, Richard M. Drake, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.34-42.

Design Considerations for Multi-Wheel Aircraft, Walter R. Barker and Carlos R. Gonzalez, (International Air Transportation: A New International Airport, Robert E. Rower, ed. 1992), p.44.

Boyer, ed., 1992), p49-63.

Design Considerations for Small Artificial Islands in Franks Tract, California, Craig H. Everts, Vedat Demirel, Russell H. Boudreau, Emy T. Carpenter and Richard Dornhelm, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p779-793.

Design Criteria and Specifications for Pipeline Rehabilitation Projects, Lawrence I. Erdos, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p742-747.

Design Criteria for an Underground Lunar Mine, John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 183-1194.

Design Criteria for Ferry Landings, Charles T. Jahren, Ralph Jones and Seiichiro Ishii, (Ports '92, David Tor-seth, ed., 1992), p493-505.

Design Live Loads for Coherent Crowd Harmonic Movements, A. Ebrahimpour and R. L. Sack, ST Apr. 92, p1121-1136.

Design of Anchored Geosynthetic Systems for Slope Stabilization, Roman D. Hryciw and Kamarudin Haji-Ahmad, (Stability and Performance of Slopes and Embarkments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1464-1480.

Design of Pneumatic Diffuser System, Steven C. Wilhelms, Charles W. Downer and Richard E. Price, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1055-1060.

Design of Socketed Drilled Shafts in Limestone, M. C. McVay, F. C. Townsend and R. C. Williams, GT Oct. 92, p1626-1637.

Design of Sorms for Emergency Spillways of SWM Ponds.

92, p1626-1637.

Design Storms for Emergency Spillways of SWM Ponds, Oner Yuce, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p934-939.

Development of Detached Breakwater Design Criteria Using a Shoreline Response Model, Julie Dean Rosati, Mark B. Gravens and Monica A. Chasten, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p814-829.

gineering Practice '92, Steven A. Hughes, ed., 1992), p814-829.
Diversion Oil Booms in Current, M. Robinson Swift, Barbaros Celikkol, Gilles LeCompagnon and Chris E. Goodwin, WW Nov. Dec. 92, p587-598.
Dutch Experience on Design of Dikes and Revetments, Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p794-813.
Effect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p1796-1814.
Engineering Pre-engineered Buildings, Alexander Newman, CE Sept. 92, p58-61.
Evaluating Lunar Base Conceptual Designs, Brent Helleckson, Richard Johnson and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy E. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p213-223.
Evaluation of Impact Factors for Horizontally Curved Steel Box Bridges, D. R. Schelling, N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221.
Experience with Beach Fill Equilibration and Recommended Design Guidelines, Erik J. Olsen, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p45-59.
Experimental Research on Groyne Stability Under Very Oblione Wassa Action

mended Design Guidelines, Erik J. Olsen, (Coastal Engineering Practice '22, Steven A. Hughes, ed., 1992), p45-59.
Experimental Research on Groyne Stability Under Very Oblique Wave Action, Antonio Baonza and José M. Berenguer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p718-732.
Filters and Leakage Control in Embankment Dams (Paper introduced by Lorn P. Dunnigan), James L. Sherard and Lorn P. Dunnigan, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p411-441.
Fluctuating Uplift and Lining Design in Spillway Stilling Basins, Virgilio Fiorotto and Andrea Rinaldo, HY Apr. 92, p578-596.
FS-1.5: Is It Appropriate for Embankment Design? Scott A. Ashford, Lawrence H. Roth, Sandra L. Madsen and Donald G. Anderson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1112-1125.
Implementation of Material Requirements in Specifications, Harvey C. Beckham and John R. Smith, (Materials: Performance and Frevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p428-433.
Integrated Approaches for Costing Design Alternatives, Guillermo F. Salazar, Stephanie Foulke and Luigi Di-Monaco, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p948-855.
International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Tereaben Resource—In Search of Solutions, Marshall Jennings, ed. and Nami G. Bhowmik, ed., 1992), p969-741.
Jury Verdict: Frequency versus Risk-Based Culvert Design, Gary L. Lewis, WR Mar App. 92, p166-184.
Lunar Surface Mining Equipment Study, Egons R. Podnieks and John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1104-1115.

New Stability Equation for Columns in Braced Frames, Raul Goncalves S., ST July 92, p1853-1870.

On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.
Optimizing Economic Returns in Drainage Design, Larry D. Geobring, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p26-31.
Out-of-Plane Strengths of Steel Beams, S. Bild, G. Chen and N. S. Trahair, ST Aug. 92, p1987-2003.
Performance of Upper Stillwater Dam, Alan T. Richardson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p148-161.
Perspectives on Seismic Design Basis Deterministic and Probabilistic Approaches, Robin K. McGuire, Robert T. Sewell, Gabriel R. Toro and J. Carl Stepp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1137-141.

dioactive Waste Management Program Committee, 1992.p. pl.137-1141. hysical Modeling of a High Velocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Jr. and Robert U. Castle, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p618-623.

1992), p618-623.
Pipe Plunge Pool Energy Dissipator, Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323.
Preliminary Assessment of the Benfits of Derating a Cask for Increasing Age/Burmup Capability, B. L. Broadhead, C. V. Parks, D. S. Joy and J. S. Tang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p2182-2189.
Proper and Improper Use of Specifications, Ronald D. Proper and Improper Use of Specifications, Ronald D.

p2182-2189.

Proper and Improper Use of Specifications, Ronald D. Kulchak, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9311-315.

Proposed Specification for Structural Steel Beams with Web Openings, ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3315-3324.

Prototype Lunar Base Construction Using Indigenous Materials, John Amin Happel, Kaspar Willam and Benson Shing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p12-122.

Recent Criteria for Design of Groins, Cassie C. Klumpp and Drew C. Baird, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p828-833.

833.
Removal of VOCs and TEL in Iron-Rich Groundwaters, James E. Rumbo, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, p116-121.
A Review of Design Criteria for High RCC Dams, Malcolm R. H. Dunstan, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, p132-147.
Revised Hydraulic Design of the Los Angeles County Flood Control System, Michael E. Mulvihill and Scott E. Stonestreet, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612-617.

Roller Compacted Concrete Tailing Retention Dam, Daniel L. Johnson, Nigel A. Skermer and Frank Bergstrom, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

p181-197.

Routine Methods for Post-Transportation Accident Recovery of Spent Fuel Casks, L. B. Shappert, R. B. Pope, R. E. Best and R. H. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1855-1859.

Schifflerized Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1920-1936.

Sensitivity of HMR-51/57/PMR-Based Probable Monton.

July 92, p1920-1936. Sensitivity of HMR-51/52/PMP-Based Probable Maximum Flood (PMF) to Basin Lag and Land Use, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p895-899. Short-Duration Rainfalls in Sicily, Giovanni B. Ferreri and Vito Ferro, HY Mar. 90, p430-435.

Simulation of Nonlinear Wave Runup on Steep Impermeable Slopes, A. N. Williams, W. G. McDougal, S. Zhang and S. N. Stevenson, Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p203-217.
So How Do We Build Now?, CE Feb. 92, p12.
Specifying the Offshore Environment, George Z. Forristall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1-41.
Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-1412.

Strength of Lag-Screw Connections, Thomas E. McLain, ST Oct. 92, p2855-2871.

ST Oct. 92, p2855-2871.

Structural Considerations in the Design of a Mars Mission Aerobrake, John Hairr and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p873-884.

Structural Design of the GN&C Navigation Base for the Space Station Freedom, Lavonia Grant and Fred Cutting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p839-849.

Structural System Design under Uncertainty Via Pareto Optimization, Dan M. Franopool and Minoru Iizuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p551-554.

Technical Issues for Lunar Base Structures, Brent Sher-wood and Larry Toups, AS Apr. 92, p175-186. Ultimate Loads of Continuous Composite Bridges, John B. Kennedy and Mohamed Soliman, ST Sept. 92, p2610-2623.

Uncertainty and Reliability Analysis of Jacket Platform, A. Olufsen, B. J. Leira and T. Moan, ST Oct. 92, p2699-2715.

Urban Development on Alluvial Fans, Lan-Yin Li Weber and Virginia Bax-Valentine, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p11-

Design data

Use of a Geographic Information System for the Highway Design Review Process, Hosin Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p153-160.

Design events

Assessing Uncertainty of Unit Hydrograph, Yeou-Koung Tung and Bing Zhao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), 5543-548

548.

Flood Control Experiences in China and 1991 Flood Disaster, Daniel J. Gunaratnam, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p965-970.

Regional Methods for Design Floods in Australia, David H. Pilgrim, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1-6.

Storm Runoff Detention for Pollutant Removal, A. Osman Akan, EE May/June 92, p380-389.

Fine Tuning the Airfield: The New Denver International Airport, Richard F. Veazey, (International Air Trans-portation: A New International Airport, Robert E. Boyer, ed., 1992), 97-13.

Graphs for Hydraulic Design of Sanitary Sewers, Venka-teswarlu Swarna and Prasad M. Modak, EE May/June 90, p561-574.

Improved Design Procedures for Vertically Loaded H-Piles in Sand, Harry M. Coyle and Ronald Ungaro, GT Mar. 91, p507-528.

Mar. 91, p307-528.

Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227.

Irrigation Project Modernization, H. Plusquellec and C. M. Burt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p197-202.

Lessons Learned from Elk Creek Dam, Dennis R. Hop-man, (Roller Compacted Concrete III, Kenneth D. Han-sen, ed. and Francis G. McLean, ed., 1992), p162-180.

Lunar He-3 Mining: Improvements on the Design of the UW Mark II Lunar Miner, gor N. Sviatoslavsky, En-gineering. Construction. and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1080-1091.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Use of Mathematical Programming Methods for Complex Systems, James G. Uber, E. Downey Brill, Jr. and John T. Pfeffer, WR May/June 92, p281-294.

Causes of Quality Deviations in Design and Construc-tion, James L. Burati, Jr., Jodi J. Farrington and Wil-liam B. Ledbetter, CO Mar. 92, p34-49.

Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-

Cylindrical Shell Redesign by Large Admissible Perturba-tions, Basem Alzahabi and Michael M. Bernitsas, (En-gineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p200-203.

Niedzwecki, ed., 1992), p200-203.
Design Loads for Sloshing in TLP Pontoons Tanks, Stephen W. Balint, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p99-113.
Flow Distribution in a Stacked Clarifier, M. Padmanabhan, T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633.
Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049.

1992), p1033-1049.

Stabilizing Drop Structure by Drainage Modifications, Larry D. Armer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p39-44.

Underwater Slope Failure, Port Hueneme, W. H. Roth, D. T. Liu, M. Tischuk and T. Hjort, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), 9940-955.

ASCE Quality Manual Undermined, Lawsuit Says, CE June 92, p16,18.

Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1037-1054.

Design Codes for Lunar Structures, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl-12.

A Design Component Library Based on Design Standards, M. Maher Hakim and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p105-112.

Jeff R. Wright, ed., 1992), p105-112.

The Design of the Airside Concourses, James M. Suchiro, Edward K. McCagg and J. M. Seracuse, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p207-216.

A Framework for the Documentation, Representation, and Processing of Design Standards, Nobuyoshi Yabuki and Kincho H. Law, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p97-104.

International Harmonization of Reliability-Based Timber Engineering Design Codes, Jozef Bodig, Michael Cald-well and Ronald W. Anthony, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-86.

Internationalization of Engineering Professions, N. D. Birrell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p983-1005.

Object-Oriented Model of Engineering Design Standards, James H. Garrett, Jr. and M. Maher Hakim, CP July 92, p323-347.

Online Design Codes: An Integrated Approach, S. Malas-ri, J. C. Olabe and L. Y. Lin, (Computing in Civil Eng-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p285-292.

Responsibility is the Key (ltr), John K. Bright, CE Aug. 92, p29-30.

Design storms for Emergency Spillways of SWM Ponds, Oner Yucel, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p934-939. Progress Report ARS/SCS Runoff Curve Number Work Group, D. E. Woodward and W. J. Gburek, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p378-382.

Sampling Errors in U. S. Extreme Wind Records, Jon A. Peterka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p280-

FGD Waste Engineering Properties are Controlled by Disposal Choice, Charles L. Smith, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p44-59.

1992), 944-94.
The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.

Detention basins

Accumulation Effects of Stormwater Management Detention Basins, Robert G. Traver and Ronald A. Chadderton, (Hydraulic Engineering: Saving a Threatenet Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p925-930.

Chemical-Constituent Load Removal Efficiency of an Urban Detention Pond/Wetlands System in the Denver Metropolitan Area, Colorado, James R. Kunkel, Timothy D. Steele, Ben Urbonas and Jay Carlson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p352-357.

Dry Creek Watershed Flood Control Plan: A Case Study.

1992), p352-357.
Dry Creek Watershed Flood Control Plan: A Case Study, Eric S. Clyde, M. N. Saquib and Dennis J. Huff, (Water Resources Planning and Management: Saving a Threatmend Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p287-292.
A Dual Level Methodology for Stormwater Detention Basin Design, Donald V. Chase and Lindell E. Ormsbee, (Water Resources Planning and Management: Saving a Threatmend Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p849-854.

hutions, Mohammad Karamouz, ed., 1992), p849-854. Levee/Floodwalf Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808. Modeling Stormwater Basin Effects, Robert G. Traver and Ronald A. Chadderton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p855-860.

Search of Southons, Mohammad Karamouz, ed., 1992), p855-860.

Regional Planning for Stormwater Management, Thomas S. George and John P. Hartigan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p492-497.

Retrofitting Storm Water Facilities for Quantity and Quality Control, Stuart G. Walesh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p786-791.

Simplified Design of Multi-Stage Outfalls for Urban Detention Basins, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p861-866.

Storm Runoff Detention for Pollutant Removal, A. Osman Akan, Ef May/June 92, p380-389.

Storm-Water Detention Storage Design under Random Pollutant Loading, Rafael Segarra-García and Vasudevan G. Loganathan, WR Sept./Oct. 92, p475-491.

Water Quality and Hydrologic Characteristics of a Wet Detention Pond, Betty Rushton, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p878-883.

Detention reservoirs
Liberty Reservoir Stormwater Retrofit Project, George G.
Balog, William P. Stack, Kenneth T. Belt and Prakash
Mistry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p346-351.
Preliminary Sizing of Detention Reservoirs to Reduce
Peak Discharges, Bruce M. McEnroe, HY Nov. 92,
p1440-1458.

p1540-1549.

pl340-1349.
Sizing Stormwater Detention Reservoirs to Reduce Peak Flows, Bruce M. McEnroe, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p719-724.
Structural and Non-Structural Alternatives for Accom-

modating Larger Floods at Dams, Louis E. Buck, (Hy-draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1228-1233.

Deterioration
Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p325-338.
Condition Monitoring of Structures Using Transient Response, George Hearn, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansara, ed. and Stein Sture, ed., 1992), p127-138.
Fatigue Strength of Deteriorated Steel Highway Bridges, Patrick D. Zuraski and John E. Johnson, ST Oct. 90, p2671-2690.

p2671-2690.

Learning to Love NDT, Bernard H. Hertlein, CE Jan. 92, p48-50.

Modeling Bridge Deterioration with Markov Chains, Mark A. Cesare, Carlos Santamarina, Carl Turkstra and Erik H. Vannarcke, TE Nov/Dec. 92, p820-833. Principles of Holistic Medicine Applied to Infrastructure Maintenance: A Test Case, Fred Catapano, CE Jan. 92,

Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange", John Zachar and Tarun R. Naik, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p107-115

p107-115. The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p80-91. U.S. Experience With Armor-Stone Quality and Performance, Richard J. Lutton, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p40-59.

mouna areawaters, Orvine 1. Magoon, ed. and William F. Baird, ed., 1992), p46-59.

Developing countries

Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, John L. Merriam, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p623-630.

Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228.

The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48.

The Engineer's Role in Sustainable Development, V. Rajagopalan, CE Aug. 92, p6.

Environmental Management Issues in Developing Countries of Southeast Asia, Au-Yeung Yin, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p631-635.

Holistic Approach to Irrigation Management in Developing Countries, Phillip Z. Kirpich, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p263-268.

Method for Preevaluation and Selection of Road Projects in Gabon, Jean-Michel Baryla, TE Jan/Feb. 92, p160-178.

Moisture and Suction in Sanitary Landfills in Semiarid

Moisture and Suction in Sanitary Landfills in Semiarid Areas, G. E. Blight, J. M. Ball and J. J. Blight, EE Nov./Dec. 92, p865-877.

Planning and Management of Water-Resource Systems in Developing Countries, M. Miloradov, WR Nov./Dec. 92, p603-619.

Planning Water Supply and Sanitation Projects in Developing Countries, Suley A. Muyibi, WR July/Aug. 92, p351-355.

Technology Transfer to Developing Countries, William J. Carmack, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p227-231.

cu., 1972, p221-231.
Use of Pilot Projects for Technology Transfer in Developing Countries, John L. Merriam, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p238-243.

tions, Ted Engman, ed., 1992), p238-243.

Development
Alameda Transportation Corridor, Arthur B. Goodwin,
(Ports '92, David Torseth, ed., 1992), p94-107.

The Application and Use of Impact Fees: Legal Issues,
Charles L. Siemon, (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Passwell, ed., Nagui
Rouphail, ed. and T. C. Sutaria, ed., 1992), p238-243.

Are Existing Traffic Methodologies Realistic? Nelson B.
Nuckles, (Site Impact Traffic Assessment: Problems and
Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed.
and T. C. Sutaria, ed., 1992), p211-216.

A Comprehensive Approach to Container Terminal Planning: Striking a Balance, William D. Friedman, (Ports
'92, David Torseth, ed., 1992), p23-42.

Computerized Transportation Planning Models for Site
Impact Analysis: Precision or Complexity! Edward A.
Mierzejewski and Timothy Jackson, (Site Impact Trafjic Assessment: Problems and Solutions, Robert E.
Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria,
ed., 1992), p128-132.

Development Impact Assessment with Transportation

ed., 1992), p128-132.
Development Impact Assessment with Transportation Models, John Loper and Robert C. Hazlett, Jr., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p233-237.
Development of a Water Conservation Program for the Spring Valley Water Company, Frank Gradilone, III., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p754-759.
The Dislogence of Players on the Development Stage, Bar.

The Dialogue of Players on the Development Stage, Barbara Barnow, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p200-204.

An Economic Evaluation of the Thunder Bay Air Terminal Development Strategies, John P. Braaksma, Andrew Schmidt and Peter Friedrichs, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p124-147.

Evolving Mitigation Requirements for Port Development, William K. Fehring, Mark Easley and David C. Carpenter, (Ports '92, David Torseth, ed., 1992), p203-213.

213.
213.
Feasibility Study of Petroleum Development in the Ross Sea, Antarctica, Dieter Beike, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p341-355.
Harbour Development in Southern Part of Thailand, Sutat Weesakul, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369.
Hydropower, Water Quality and Waste Discharge, Shoou-Yuh Chang, Shu-Liang Liaw, Steven F. Railsback and Michael J. Sale, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p380-385. p380-38

p380-385. ICU—A Method of Analyzing Signalized Intersections, Weston S. Pringle and Robert W. Crommelin, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p26-31.

Sutaria, ed., 1992), p26-31.

Implementation, Dennis H. Ross and Scott Ian Thorpe, UP Sept. 92, p106-118.

New Cruite Terminal for San Ferancisco, Erik Novarand.

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p58-71.

Object-Oriented Finite Element and Graphics Data-Translation Facility, Jamai A. Abdalla and C. John Yoon, CP July 92, p302-322.

Object-Oriented Programming in Robotics Research for Excavation, Darcy M. Bullock and Irving J. Oppenheim, CP July 92, p370-385.

Offshore Structures—Past, Present, and Future, Lyle Finn, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p218-242.

Shipping Cask Development Loaded 4 PWR Fuel Assemblies, H. Y. Kang, J. C. Lee and S. G. Ro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1844-1847.

p1844-1847.
Shouldn't i be Transportation Impact Assessment? Kenneth E. Dallmeyer, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Negui Rouphail, ed. and T. C. Sutaria, ed., 1992), p133-137.
Strategic Planning for Technology Development, Eitan Agai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1036-1041.
Sydney Airport International Terminal Development, Barry R. Munce, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p258-271.

p258-271.

Taking Account of the Biosphere in HLW Assessment, Graham M. Smith and Helen A. Grogan, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p2306-2312.

p2306-2312. Traffic Impact Fees in Schaumburg, Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p170-174. Traffic Impact Studies for Marriott Corporation International Headquarters, S. Sabanayagam and Edward Y. Papazian, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p148-153.

Traffic Impact Study Ingredients, Peter A. Terry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p217-222.

Sutaria, etc., 1972b, p217-222.
Uniform Traffic Impact Assessment Studies—A Case History of Riverside County, California, Lawrence A Toerper, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p114-117.

Development shells
Shell/Toolkit for Multimedia Educational Applications,
Boyd C. Paulson, Jr., Mohan Manavazhi, Hossam ElBibany and Rafay Khan, (Computing in Civil Engineering and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992),
p348-355.

Dewatering

Conditioning and Dewatering of Anaerobically Digested BPR Sludge, William R. Knocke, Jeffrey W. Nash and Clifford W. Randall, EE Sept./Oct. 92, p642-656.

CHIDIGU W. RADIGUI, EE SEPL/UCI. 92, p042-656. Evaluation of Dewatering and Treatment System at the Chisman Creek Superfund Site, Precha Yodnane, Denis W. Okorn and Burton M. Marshall, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p250-255.

Excavation and Support Systems in Urban Settings, J. P. Gould, G. J. Tamaro and J. P. Powers, [Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171.

Synchrotron Radiation Measurements of Degree of Satu-ration in Porous Matrix, Scott A. Wells and Richard I. Dick, EM Aug. 92, p1738-1744.

Diagnostic rostines

Cathodic Protection Diagnostics for Corrosion Mitigation of Infrastructure Components, Vicki L. Van Blaricum, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 37-144.

A Diagnostic Aid for Wastewater Treatment Plants, Catherine D. Perman and Leonard Ortolano, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p86-104.

Jet Grouting for a Self-standing Wall, Gohichi Miyasaka, Yutaka Sasaki, Toshiaki Nagata, Mitsuhiro Shibazaki, Masahiro Iji and Masami Yoda, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p144-

Retaining Wall to Keep Rock Out of School, CE Nov. 92,

Dynamics of Buildings with V-Shaped Plan, Sudhir K. Jain and Utpal K. Mandal, EM June 92, p1093-1112.

Ultimate Loads of Continuous Composite Bridges, John B. Kennedy and Mohamed Soliman, ST Sept. 92, p2610-2623.

### Diesel fuels

Diesel as Case of Consumer Choice in Alternative Trans-port Fuels, Joel R. Couse, EY Aug. 92, p95-108.

Fingerprint Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluore-cence, Daniel York Pharr, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p579-584.

### Differential equation

Deflections of Beams with Varying Rectangular Cross Section, Filippo Romano and Gaetano Zingone, EM Oct. 92, p2128-2134.

Oct. 92, p2128-2134.

Entropy-Based Velocity Distribution Model in Study of Distribution of Suspended-Sediment Concentration, Chao-Lin Chiu and Corey A. Rich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p520-525.

Explicit Equations of Motion of Discrete System of Disks in Two Dimensions, Oleg Vinogradov, EM Sept. 92,

p1850-1858.

Inflation Instability of Cylindrical Membranes, Baoqing Yu, William A. Nash and Thomas J. Lardner, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p916-919.

Investigation of Parametrically-Induced Excitation in Concrete Columns, Nader Ghafoori and Kambiz Farhang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1051-1054.

and John M. Nieuzweck, 20., 1992, p1031-1034.
Minimal Storage Finite Element Solution of Large-Scale
Three-Dimensional Elastodynamic Problems, S. Hassanzadeh, S. Foresti, H. Murakami and V. Sonnad,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p762-769.

Numerical Differentiation Using Gaussian Quadrature, B. L. Ly, EM Nov. 90, p2568-2572.

Pre-Envelope Covariance Differential Equations, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p180-

Probabilistic Rotordynamics Analysis Using an Adaptive Importance Sampling Method, Y.-T. Wu, T. Y. Torng, O. H. Burnside and M. H. Rheinfurth, (*Probabilistic Mechanics and Structural and Geotechnical Reliability*, Y. K. Lin, ed., 1992), p491-494.

Responses of Nonlinear Oscillators Excited by Non-Gaussian Pulse Processes, Sau-Lon James Hu, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p144-147.

Stochastic Finite and Boundary Elements, Gautam Dasg-upta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p932-935.

Study of Open-Channel Dynamics as Controlled Process, Yuri A. Ermolin, HY Jan. 92, p59-72.

### Differential settlement

Differential Motions in Sedimentary Valleys, Apostolos S. Papageorgiou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Settling Down Easy, Charles R. Heidengren, CE Dec. 92, p72-74.

Swimming Pools Supported by Dissimilar Bearing Strata, G. S. Kovacs, CF May 92, p118-120.

A Simple Method to Compute Wave Loads on a TLP, Moo-Hyun Kim, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p158-172.

Three-Dimensional Scattering of Solitary Waves by Verti-cal Cylinder, Keh-Han Wang, Theodore Y. Wu and George T. Yates, WW Sept./Oct. 92, p551-566.

Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p605-610.

ed., 1992), pous-oliv.

Design of Pneumatic Diffuser System, Steven C.

Wilhelms, Charles W. Downer and Richard E. Price, (Hydraulic Engineering: Saving a Threatment Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1055-1060.

Gas Transfer in Diffused Bubble Plumes, Steven C. Wilhelms and Sandra K. Martin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p317-322.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Numerical and Physical Modeling of Air Diffuser Plume, D. W. Machina, J. A. McCorquodale and J. K. Bewtra, EE Mar./Apr. 92, p253-267.

3-D Modelling of Heat Discharge from Ul-Jin Power Plant into Coastal Waters of Korea East Sea, Young Jae Ro, Tae In Kim, Ha Keun Sung and Suk Woo Lee, (Es-tuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p501-512.

Aspects of Parallel Processing in Reservoir Simulation, Richard Ewing, Patrick O'Leary and James Sochacki, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p111-114.

Automated Diffusion Wave Modeling of Watershed Hy-draulics, Robert N. Eli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992).

Benthic Exchange of Toxic Contaminants, Steve C. McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik.

ed., 1992), p386.

cu., 1972), p.360.

Circulation Modelling and Water Quality Prediction, Hans Jacob Vested, Ole Krull Jensen, Ann Christina Ellegaard, Hanne Karin Bach and Erik Koch Rasmussen, (Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p317-331.

Diffusion and Dispersion in Coastal Waters, E. John List, Gregory Gartrell and Clinton D. Winant, HY Oct. 90, p1138-1179.

Diffusion of Carbon Dioxide and Iodine Through Yucca Mountain Tuffs—Effects of Temperature and Moisture Content, Tevfik Bardakci, Franklin G. King and Ajeet Singh, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1946-1952.

prant Communic, 1992, p. 1990-1992.

Diffusion of Radionuclides in Compacted Bentonite, Jong-Won Choi, Choong-Hwan Jung, Kwan-Sik Chun, Hyun-Soo Park, Joo-Ho Whang and Byung-Hun Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2278-2283.

General Mechanism of Turbulence, Wenxiong Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.

Hydrodynamics for Water Quality Models, Mark Dortch and Billy Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p145-

Important Sources of Errors in Computational Hydraulics, Nosrat Maghsoudi and Daryl B. Simons, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p392-397.

Kinematic Wave Controversy, Victor M. Ponce, HY Apr. 91, p511-525.

Non-Point Source Pollution Due to Runoff Over Sandy Soil, D. Payne, C. Richardson, A. D. Parr and K. Janish, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p439-444.
Numerical Methods 101—Convergence of Numerical Models, David B. Thompson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p398-403.
Occanographic Influences on Oil Snill Movement in the

Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p398-403.

Oceanographic Influences on Oil Spill Movement in the Arabian Gulf, S. Venkatesh and T. S. Murty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p108-113.

On the Diffusional Stress Transmission, Włodzimierz Brząkańs, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p175-178.

Short Beach Nourishment Fill Performance on an Irregular Coatline, Douglas W. Mann, Lamont W. Curtis and Thomas H. Daniel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119.

A Stochastic Model for Crack Initiation and Fatigue Life, Michael R. Emptage and Bevil J. Shaw, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p308-311.

Three-Dimensional Eulerian-Lagrangian Transport Model, A. K. M. Quanrul Ahaan and M. S. Bruno, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alain Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p1-12.

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Bhowmik, ed., 1992), p946-951.

Diffusion coefficient
Entropy-Based Velocity Distribution Model in Study of Distribution of Suspended-Sediment Concentration, Chao-Lin Chiu and Corey A. Rich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p520-525.

Estimation of Chloride Diffusion Coefficient and Tortuosity Factor for Mudstone, F. S. Barone, R. K. Rowe and R. M. Quigley, GT July 92, p1031-1046.

New Technique to Evaluate the Surface Degradation of Cerenetaneous Matrix, Takayuki Amaya and Kazunori Suzuki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1670-1673.

Vertical Distribution of Suspended Sediment in Uniform Open-Channel Flow, Motohiko Umeyama, HY June 92, p936-941.

Diffusivity

Characterization of the Topopah Spring and Tiva Canyon Tuffs at Yucca Mountain, Ajeet Singh, Shamsuddin Ilias and Gary Tatterson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1953-1958.

Mahagement Digital systems

Sources of GIS Data, Lowell Kent Smith and Tracy Lenocker, CC Nov. 92, p7-8.

Yucca Mountain Digital Database, Carl R. Daudt, Charlotte Abrams and William J. Hinze, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Digital techniques
Characterization of Granular Material Composite Structures Using Computerized Tomography, Xiaogong Lee, William C. Dass and Charles W. Manzione, (Engineer) man C. Dass and Charles W. Manzione, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p268-271.
Digital Imaging Concepts and Applications in Pavement Management, Stephen G. Ritchie, TE May/June 90, p287-298.

Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.1037-1054.

Dutch Experience on Design of Dikes and Revetments, Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p794-813.

Earthquake Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Ger-ald M. Serventi and Larry L. Scheibel, (*Ports '92*, David Torseth, ed., 1992), p429-442.

A Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, Michael F. Sheridan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p2033-2038

Performance of an Embankment Dam With Partial Cut-off, Pascual H. Perazzo and Tauseef I. Choudry, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1022-1032.

Subaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744.

Associative Plasticity for Dilatant Soils, Panos D. Kiousis and Ali A. Abdulla, EM Apr. 92, p763-785.

Constitutive Equation for Granular Material by Hypoelasticity, R. K. Mysore and W. E. Falby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p733-736.

meter tests

Datatometer tests
Deep Compaction by Vibro Wing Technique and Dynamic Compaction, Kaare Senneset and Jarle Nestvold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p889-901.

## Dilution

A Comparison of Glass Reaction at High and Low SA/V: PCT Vs. MCC-1, William L. Ebert and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p934-942.

Dimensional analysis

Analysis and Design of Doweled Slab-on-Grade Pave-ment Systems, Anastasios M. Ioannides and George T. Korovesis, TE Nov/Dec. 92, p745-768.

Cohesionless Fine-Sediment Bed Forms in Shallow Flows, Peter A. Mantz, HY May 92, p743-764.

Dimensional Analysis of Buckling of Stiffened Composite Shells, B. Moradi and I. D. Parsons, EM Mar. 92, p557-574.

Softening and Snap-Through Behavior of Reinforced Elements, C. Bosco and A. Carpinteri, EM Aug. 92, p1564-1577.

# Disaster relief

Drillers Offer Disaster Assistance (ltr), S. Scot Litke, CE June 92, p37

FEMA Study Evaluates Postdisaster Housing, CE Aug. 92, p13.

Hurricane Response Continues, CE Nov. 92, p12-13.

Responding to Disasters, James S. Cohen, CE Jan. 92, p6. When Disaster Strikes, ASCE Wants to Help, CE June 92, p83.

An Evaluation of Highway Flood Damage Statistics, Jen-nifer Rhodes and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1082-1087.

The Great Chicago Flood of 1992, Randall R. Inouye and Joseph D. Jacobazzi, CE Nov. 92, p52-55.

Jacobs Description of Heat Discharge from Ul-Jin Power Plant into Coastal Waters of Korea East Sea, Young Jae Ro, Tae In Kim, Hg Keun Sung and Suk Woo Lee, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p501-512.

Activities of the North Central Texas Council of Governments in Urban Storm Water Planning, John Promise and Samuel W. Brush, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), ed. 24.249

Analysis of Spiral Vortex and Vertical Slot Vortex Drop Shafts, Michael C. Quick, HY Mar. 90, p309-325.

Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, p605-610.

Are High and Low Flow Habitat Vilues Really the Same? Terry Waddle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p374

Automated Operation of Pumping Stations in Russia, Yuri A. Ermolin and Leonid I. Zats, IR July/Aug. 92, p555-563.

p33-363. Behavior of Thermal Wedges in Oscillating Reservoir Flow: A Case Investigation, Vahid Alavian, Neil Sutherland and Ming Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), a501-504. p501-506.

Bin-Wall Failure Caused by Eccentric Discharge of Free-Flowing Grain, R. A. Bucklin, S. A. Thompson and I. J. Ross, ST Nov. 90, p3175-3190.

Calculating Flow in Manifold and Orifice System, Fazal H. Chaudhry and Luisa F. R. Reis, EE July/Aug. 92, p585-596.

Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Fach and Géraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1112-1117.

CSO Abatement for Gloucester Harbor in Massachusetts, Jon R. Pearson, Donald J. Chelton and Michael P. Colins, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1240-1241.

- Definition of a Weighting Function for Rainfall in Aggregated Rainfall-Runoff Models, Paolo Bartolini and Juan B. Valdés, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p537-647
- Design Discharge for Urban Stormwater Drainage, A. Osman Akan, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p713-718.

Design Procedure for Flow Over Side Weirs, Ali Uyumaz and Roger H. Smith, IR Jan./Feb. 91, p79-90.

Discharge Capacity for Curb-Opening Inlets, Ali Uyu-maz, HY July 92, p1048-1051.

- Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, Hans J. Peterson and William R. Grout, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p516-522.
- Flow Capacity Effect on Vertical Drain Performance, R. Robert Goughnour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p993-1005.

Flow Measurement with Rectangular Free Overfall, Vito Ferro, IR Nov./Dec. 92, p956-964.

Groundwater Modeling of Wastewater Management Op-tions, Dominique N. Brocard and Angelos Protopapas, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p287-292.

and valid C. howmins, ed., 1992, p.881-292.

Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area, Jill C. Bicknell and Sachiko Itagaki, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p451-456.

Coop Rating Curves from Goodwin Creek, Roger A. Kuhnle and Andrew J. Bowie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p741-746.

Management of Agricultural Drainage Pollution Considering Regional Cooperation, T. C. Lyons and M. E. Grismer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p448-455.

NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, Paul Makowski and John G. Garland, III., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p797-

Numerical Modeling of Withdrawals at Large Dams, Mi-chael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 5341-

346.
Oil Under Ice: Buoyancy Viscous Spreading, Sujeeva A. Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p102-107.
OUTFL—A Spreadsheet for Design of Adequate Storm Drainage Outfalls, Oner Yucel and Edward L. Lownan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p707-712.
Planning. Assessing and Implementing Pipeline Rehabili-

source—in search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p707-712.

Planning, Assessing and Implementing Pipeline Rehabilitation Options, B. Jay Schrock, (Water Resources Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741.

Pollution Control Under the NPDES Stormwater Program, Thomas S. George and June Barrett-McDaniels, (Environmental Engineering: Saving a Threatened Resource—in Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645.

Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, (Hydraulic Engineering: Saving a Threatened Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p164-169.

Rating Correction for Lateral Settlement of Parshall Flumes, Steven R. Abt and Kenneth J. Staker, IR Nov./Dec. 90, p797-803.

Release Alternatives on a 3-D Salinity Simulation, Ber-

Release Alternatives on a 3-D Salinity Simulation, Bernard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-

Sediment Rating Curves Based on Ranked Values, Wolfgang Summer and Jean-Pierre Villeneuve, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p683-688.

Side Weir in Triangular Channel, Ali Uyumaz, IR Nov./ Dec. 92, p965-970.

G. Wakim and S. Sarraf, WW Mar./Apr. 92, p166-174. State Permit Program and Toxics Individual Control Strategies: A Case Study, Altaf A. Memon, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p561-566.

Study of Groins on the Middle Rio Grande, Drew C. Baird and Cassie C. Klumpp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p822-827.

Thermal Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604.

Three-Dimensional Thermal Jump in Stratified Cooling Channel, L.-L. Guo and R. E. Baddour, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p381-384.

Niedzwecki, ed., 1972), p.501-308.
Using Simple Models to Evaluate Complex Storm Effects,
Paul L. Freedman and John K. Marr, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-89.
Water Parising as Justification for Parmit Backaliding

Water Reduction as Justification for Permit Backsliding, Gary W. Siegel and Margaret L. Dwyer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156.

Discharge coefficients
Design Procedure for Flow Over Side Weirs, Ali Uyumaz
and Roger H. Smith, IR Jan./Feb. 91, p79-90.

Momentum Model of Flow Past Weir, Amruthur S. Ramamurthy, Ngoc-Diep Vo and German Vera, IR Nov./Dec. 92, p988-994.

Nov./Dec. 92, p988-994.

Discharge measurement
Characteristics of U.S. Geological Survey Discharge
Measurements for Water Year 1990, Janice M. Fulford,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992, p452-457.

Dividing Flow in Open Channels, Amruthur S.
Ramamurthy, Duc Minh Tran and Luis B. Carballada,
HY Mar. 90, p449-455.

Dracy-Weisbach Roughness Coefficients for Gravel and
Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz
and Gary A. Wieman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p747-752.

WSPRO Files for Slope-Area Computations, Janice M.
Fulford, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p329-334.

Discontinuities

Discontinuous Deformation Slope Stability Analyses, An-Bin Huang and Max Y. Ma. (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p479-492.
Fracture Toughness of DMMC, Richard J. Arsenault, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p228-231.
Use of Shi's Discontinuous Deformation Analysis on Rock Slope Problems, Man-chu Ronald Yeung and Richard E. Goodman, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p461-478.

and roos W. Johanger, ed., 1972, p. polities.

Computational Framework for 3D Nonlinear Discrete Crack Analysis, V. E. Saouma, R. W. Reich and J. Cervenka, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p. 788-791.

Computational Laboratory for Discrete Element Geomechanics, John M. Ting and Brent T. Corkum, CP Apr. 92, p. 129-146.

cnanics, John M. Ting and Brent T. Corkum, CP Apr. 92, p129-146.

Computer Simulation of Direct Shear Test, Jeen-Shang Lin, John M. Ting, Baliso Vuba and Shiou Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p425-428.

Cone Models for Homogeneous Soil. 1, Jethro W. Meek and John P. Wolf, GT May 92, p667-685.

Discrete Element Method for Slope Stability Analysis, Ching S. Chang, GT Dec. 92, p1889-1905.

Discrete Markov Process Approach to Fatigue Crack Growth, T. J. Enneking and B. F. Spencer, Jr., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p792-795.

Discrete Mechanics of Sediment Transport, Peter K. Haff, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p756-759.

Discrete Optimization of Structures Using Genetic Algorithms, S. Rajeev and C. S. Krishnamoorthy, ST May 92, p123-1250.

A Discussion of the Numerical Modeling of Sea Ice Ridg-

A Discussion of the Numerical Modeling of Sea Ice Ridg-ing, Mark A. Hopkins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p888-891.

p888-891.

Modeling Monsoon-Affected Rainfall of Pakistan by Point Processes, Thian Yew Gan and Zahoor Ahmad, WR Nov./Dec. 92, p671-684.

Parallelisation of a Distinct Element Stress Analysis Program, Siong K. Tang, Gregory K. Egan and Michael A. Coulthard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p770-777.

Plane Frame Ontimum Design Environment Based on

Plane Frame Optimum Design Environment Based on Genetic Algorithm, W. M. Jenkins, ST Nov. 92, p3103-3112.

Discrimination
County Defines Minority Program Too Broadly, CE Feb. 92, p28.

Diseases
Applications of Remote Sensing to Irrigated Agriculture,
Christopher M. U. Neale and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p541-

Evaluation of Ozone Disinfection Systems: Characteristic Time T, O. Lev and S. Regli, EE Mar./Apr. 92, p268-285

285.
Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.
Pilot Study to Meet Drinking Water Regulations, Linda Rae Leong, Patti P. Craddock and Carol Ruth James, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509.

ed., 1992), p504-509. Dispersion

Air Emissions Testing of Air Toxics at WWTPs, Michael
J. Barboza, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p79-85.

Comparison of Dispersion Models for Wastewater Treatment Emissions, Jin-Sheng Lin and Lynn M. Hildemann, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p7-11.

Diffusion and Dispersion in Coastal Waters, E. John List,
Gregory Gartrell and Clinton D. Winant, HY Oct. 90,
p1158-1179.

Embankment Dam Cracking (Paper introduced by

Gregory Gartrell and Clinton D. Winant, HY Oct. 90, p118-1179.

Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p120-203.

Hydraulic Fracturing in Low Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p94-119.

Identification and Nature of Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan and Rey S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p283-300.

The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, Boris Galperin, Alan F. Blumberg and Robert H. Weisberg, (Estuarier and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p332-343.

Important Sources of Errors in Computational Hydraulics, Nosral Maghsoudi and Daryl B. Simons, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p392-397.

Longitudinal Dispersion Coefficients in Estuary, I. Guymer and J. R. West, HY May 92, p718-734.

Bhowmik, ed., 1992), p392-397.
Longitudinal Dispersion Coefficients in Estuary, I. Guymer and J. R. West, Hy May 92, p718-734.
Mixing, Dispersion, and Resuspension in Vicinity of Ocean Wastewater Plume, Libe Washburn, Burton H. Jones, Alan Bratkovich, T. D. Dickey and Ming-Sue Chen, Hy Jan. 92, p38-58.
Modeling DO Conditions in Streams with Dispersion, Antonis D. Koussis, Prashant Kokitkar and Adosh Mehta, EE May/June 90, p601-614. Strain-Softening Media, L. J. Sluys and R. de Borst, (Engineering Mechanics, Loren D. Luttes, ed. and John M. Niedzwecki, ed., 1992), p624-627.
Passive Dispersive Transport Modelling: Comparison

ed., 1992), p624-627.
Passive Dispersive Transport Modelling: Comparison with Experimental Rhodamine Data in the Elbe Estuary, Germany, Joachim Krohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p127-139.
Piping in Earth Dams of Dispersive Clay (Paper introduced by Norman L. Ryker, (Embankment Dams—James L. Sherard, Roy S. Decker and Norman L. Ryker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p55-93.
Some Engineering Problems with Dispersive Clays (Paper

ed., 1992), p55-93.
Some Engineering Problems with Dispersive Clays (Paper introduced by Lorn P. Dunnigan), J. L. Sherard, L. P. Dunnigan and R. S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p301-311.
Targeting of Agl in a Utah Winter Orographic Storm, James A. Heimbach, Jr. and Arlin B. Super, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p553-558.

Displacement
Antiplane Problems of Monoclinic Material, Chien-Ching
Ma, EM Sept. 92, p1765-1782.

Bending of Thin Plate with Three-Point Support, Alexander Azarkhin, ST May 92, pl416-1419.
Concrete Surface Characterization Using Optical Metrology, Nora C. Sassenfeld and Michelle M. Crull, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p206-

Damage to Two Apartment Buildings Due to Moisture Variation of Expansive Soil, Robert W. Day, CF Aug. 92, p169-176.

Homogeneous Structures Subjected to Repeated Structur-al System Changes, Luigino Dezi, Giovanni Menditto and Angelo Marcello Tarantino, EM Aug. 90, p1723-1732.

1732.
Large-Displacement Effects on Dynamic Response of Eccentric Buildings, Lidia La Mendola and Maurizio Papia, EM May 91, p934-973.
Modal and Response Analyses of a Paper Machine Foundation, Jerry Chen and J. A. Bohinsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p574-581.
Modeling of Lateral Soreads in Sitty Sands by Sliding Soil

ed., 1992), p574-581.
Modeling of Lateral Spreads in Silty Sands by Sliding Soil
Blocks. Ricardo Dobry and Mohammad H. Baziar,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p623-652.
Moving Hinge in Large-Displacement Problems, F. Lu
and A. N. Sherbourne, EM Sept. 92, p1840-1849.
New Spline Finite Element for Plate Bending, S. C. Fan
and M. H. Luah, EM June 92, p1065-1082.
Nonlinear Analysis of Steel Space, Structures, Ram Chan-

Nonlinear Analysis of Steel Space Structures, Ram Chandra, D. N. Trikha and Prem Krishna, ST Apr. 90, p898-909.

p898-909.

Pile Driving: Can it Cause Slope Movement? D. G. Anderson, R. E. Riker and B. P. Erickson, (Ports '92, David Torseth, ed., 1992), p350-363.

Pipeline Response to Pile Driving and Adjacent Excavation, P. W. Linehan, A. Longinow and C. H. Dowding, GT Feb. 92, p300-316.

Pre-Test Selection of Static Force and Displacement Measurement Locations for Damage Assessment, Masoud Sanayei, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p567-570.

1972, 300-31, 300-3

1. N. Lin, ed., 1992), 9304-307.
Seismic Passive Resistance of Tied-Back Walls, R. Richards, Jr. and D. G. Elms, GT July 92, p996-1011.
Simple Rigid Plastic Model for Seismic Tilting of Rigid Walls, Raj Siddharthan, Samia Ara and Gary M. Norris, ST Feb. 92, p469-487.
Slove Divinglacement from Plat Divining Pichard E. Bitter

Slope Displacement from Pile Driving, Richard E. Riker, Donald G. Anderson and D. Dexter Bacon, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992),

Timoshenko Beam Element Resting on Two-Parameter Elastic Foundation, L. M. Shirima and M. W. Giger, EM Feb. 92, p280-295.

p292-309.

Displacements
Batter Piles and the Seismic Performance of PileSupported Wharves, W. H. Roth, H. Fong and C. de
Rubertis, (Ports '92, David Torseth, ed., 1992), p336-

349.
349.
Complementary Potentials of Finite Elasticity, Gerald Wempner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki; ed., 1992), p506-509.
Family of Iterative Shear-Deformation Theories for Shallow Shells, Zenon Rychter, EM Nov. 92, p2159-2175.
Nonlinear Geometric and Material Considerations in Shell Structures, S. A. Schimmels and A. N. Palazotto, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki; ed., 1992), p548-551.
Parameter Estimation in Complex Linear Structures, M.

Parameter Estimation in Complex Linear Structures, M. R. Banan, M. Banan and K. D. Hjelmstad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p571-574.

Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Mohammed N. Chang. (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p975-988.

Subaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744.

Traffic Impact Assessment for Snow Disposal Facilities—Extended Abstract, John P. Braaksma, Ian Lockwood and Juan Salimas, (Site Impact Traffic Assessment Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p175-179.

Dissipation
Characteristic Dissipative Galerkin Scheme for Open-Channel Flow, F. E. Hicks and P. M. Steffler, HY Feb. 92, p337-352.

tability Analysis of a Municipal Solid Waste Landfill, Jonathan D. Howland and Arvid O. Landva, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1216-1231.

Dissolved oxygen
Accurate Method for Calculation of Saturation DO,
Hestong Hua, EE Sept./Oct. 90, p988-990.
Aeration at Ohio River Basin Navigation Dams, Steven
F. Railsback, John M. Bownds, Michael J. Sale, Martha
M. Stevens and George H. Taylor, EE Mar/Apr. 90,

Aeration Using the Howell-Bunger Valve, D. D. Kraus and E. R. Hixson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p299-304.

304.

Computer Support for Water Quality, etc., 1972, p. 293-304.

Computer Support for Water Quality Management in San Diego Bay, A. E. Bale and G. T. Orlob, (Water Resource Flanning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p. 176-181.

Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

Design of Pneumatic Diffuser System, Steven C. Wilhelms, Charles W. Downer and Richard E. Price, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p. 1055-1060.

Gas Transfer in Diffused Bubble Plumes, Steven C. Wilhelms and Sandra K. Martin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p. 317-322.

ed., 1992), p317-322.

ed., 1992), p317-322.
Hydrodynamic and Water Quality Modeling of Lower Green Bay, David J. Mark and Barry W. Bunch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralphcheng, ed. and Craig Swanson, ed., 1992), p657-668.
Hydropower, Water Quality and Waste Discharge, Shoou-Yuh Chang, Shu-Liang Liaw, Steven F. Rallsback and Michael J. Sale, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p380-385.
Improved First-Order Uncertainty Method for Water.

ps80-38.
Improved First-Order Uncertainty Method for Water-Quality Modeling, Charles S. Melching and Sharath Anmangandla, EE Sept./Oct. 92, p791-805.
Modeling DO Conditions in Streams with Dispersion, Antonis D. Koussis, Prashant Kokitkar and Adosh Metha, EE May/June 90, p601-614. Bay and Tributaries, John P. St. John, William M. Leo and Robert Gaffoglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-95.
Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersaturation, Perry L. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p311-316.

Modified QUAL2E Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, Rex A. Tolman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p194-199.

Non-Traditional Water Quality Approaches, Carl P. Houck, Joan Brooks, Ronald D. French and Duane Humble, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438.

Thermal Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604.

Distortional Buckling Solutions for Continuous Composite Beams, Mark Andrew Bradford and Zhi Gao, ST Jan. 92, p73-89.

Thin-Walled Multicell Box-Girder Finite Element, A. Ghani Razaqpur and Hangang Li, ST Oct. 91, p2953-2971.

Coarse-Grain Parallel Computing Using ISIS Tool Kit, Ralph Finch and Shao-Kong Kao, CP Apr. 92, p233-

Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, 0-87262-869-8, 1260pp.

LAN Ho! Structural Analysis on a Network, Suresh K. Sharma and John W. Baugh, Jr., (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 639-646.

Nonlinear Structural Analysis on a Distributed System, Eric M. Lui and Fred H. Schlereth, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p647-654.

On Distributed Processing Applications in Finite Element Analysis, Edward J. Plaskacz, Martin R. Ramirez and Sanjeev Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p107-

Parallelism, Object Oriented Programming Methods, Portable Software and C++, I. G. Angus, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p506-513.

Structural Optimization in a Distributed Computing En-vironment, B. K. Voon and M. A. Austin, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1922, p.778-785.

A Frequency Surface for Rainfall Intensity and Duration, G. V. Loganathan and M. A. Parkin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p386-390.

Information Theory in Risk Analysis, James D. En-glehardt and Jay R. Lund, EE Nov./Dec. 92, p890-904.

Mean Size Distribution of Bed Load on Goodwin Creek, Roger A. Kuhnle and Joe C. Willis, HY Oct. 92, p1443-1446.

Vertical Sediment Distribution, Jin Ren Ni and Guang Qian Wang, HY Sept. 91, p1184-1194.

## Distribution patterns

Assessment of Derived Flood Frequency Distributions, Timothy H. Raines and Juan B. Valdes, (Water Re-sources Planning and Managemest: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1922), p268-273.

Recurrence Interval of Geophysical Events, Hugo A. Loaiciga and Miguel A. Mariño, WR May/June 91, p367-382.

# Disturbances

Analysis of Compressibility of Sensitive Soils, T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

Simulation of Runoff and Infiltration of Disturbed Land, Ben Chie Yen and Robert Riggins, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p401-406.

Very Low Frequency Radio Astronomy from Lunar Orbit, Nebojsa Duric, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1925-1934.

Diversion

Application of Monthly Model of Los Angeles Aqueduct
System to Investigate Impacts from Mono Lake Tributary Diversions, Russ T. Brown and William R.
Hutchison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p10421048.

Balancing Hydraulic Requirements for Storage and Di-version in Planning Subsurface Facilities for the Con-trol of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.

Diversion structures
The Design and Construction of Shuikou Project RCC
Diversion Wall, Ma Zhong Hang, Cai Heming and E.
B. Kollgaard, (Roller Compacted Concrete III, Kenneth
D. Hansen, ed. and Francis G. McLean, ed., 1992),

esign Guidelines for a Sedimentation Control System at Open Channel Diversions, Vincent S. Neary and A. Jacob Odgaard, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p198-203.

Diversion Oil Booms in Current, M. Robinson Swift, Bar-baros Celikkol, Gilles LeCompagnon and Chris E. Goodwin, WW Nov./Dec. 92, p587-598.

Dividing Flow in Open Channels, Amruthur S. Ramamurthy, Duc Minh Tran and Luis B. Carballada, HY Mar. 90, p449-455.

obbins, William E.
Villiam Dobbins, Dead at Age 78, was Noted for Re-search, CE Apr. 92, p71.

Docks
Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Potts '92, David Torseth, ed., 1992), p737-748.
Environmental Effects of Beaufort Sea Causeways, J. M. Colonell, B. J. Gallaway and A. W. Niedoroda, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974.

Modifications to Coal Pier 6 Made Necessary by a Deeper Channel, Zolan Prucz, Barney T. Martin and Jerry L. Richstein, (*Ports '92*, David Torseth, ed., 1992), p164-

177.
Recycled Materials for Port Construction, David S. Miller, (Ports '92, David Torseth, ed., 1992), p815-825.
Spin-fin Piles Gain in Application, CE Jan. '92, P12-13.
West Point Temporary Construction Dock, Chris Sundberg and Jerry Stubbs, (Ports '92, David Torseth, ed., 1992), p723-736.

Guide to Evaluating Engineering Software: Program Doc-umentation (book review), Philip Terry, CC Mar. 92,

Proper and Improper Use of Specifications, Ronald D. Kulchak, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p311-315.

Dolomite
Grouting for Hazardous Waste Site Remediation at Necco Park, Niagara Falls, New York, K. D. Weaver, R. M.
Coad and K. R. McIntosh, (Grouting, Soil Improvement
and Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p1332-1343.

Dolos
Application of a Dolos Structural Design Procedure, Jeffrey A. Melby, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p830-846.

Dolphins, structures

Dolphias, structures
Pre-Compression of Concrete Breasting Dolphins Solves
Construction Problem, Robert A. Blowers, Alexander
Matlin and Antoni J. Zelechowski, (Ports '92, David
Torseth, ed., 1992), p602-615.
Recycled Materials for Port Construction, David S.
Miller, (Ports '92, David Torseth, ed., 1992), p815-825.

Domes, structural

Analysis of the Georgia Dome Cable Roof, Gerardo Castro and Matthys P. Levy, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p566-573.

Classical Buckling Load of Spherical Domes Under Uni-form Pressure, Haruo Kunieda, EM Aug. 92, p1513-1525.

Effect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p1796-1814.

Floating Fabric Over Georgia Dome, Matthys Levy, CE Nov. 91, p34-37. Force Deformation Equations for Initially Curved Laterally Loaded Beam Columns, R. E. McConnel, EM July 92, p1287-1302.

92, p1201-1302.

Inflation Concept Development for Inflatable Lunar Structures, Craig E. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p171-182.

Mechanical Equipment Requirements for Inflatable Lunar Structures, James M. Hines, Craig E. Miller and Richard M. Drake, AS Apr. 92, p248-256.

Thermal Investigation of a Large Lunar Telescope, Sherry T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 842-1852.

Doppler systems
Measured Internal Kinematics for Shoaling Waves with
Theoretical Comparisons, M. W. Griffiths, W. J. Easson and C. A. Greated, WW May/June 92, p280-299. Velocity Profiles in Steep Open-Channel Flows, Akihiro Tominaga and Iehisa Nezu, HY Jan. 92, p73-90.

Analysis and Design of Doweled Slab-on-Grade Pave-ment Systems, Anastasios M. Ioannides and George T. Korovesis, TE Nov./Dec. 92, p745-768.

Mining for Building Expansion, Richard M. Croswell, Robin B. Dill and John Booth, CE Dec. 92, p48-51.

Crane Raise with Zero Downtime, William L. Casper and Alex Surko, (*Ports '92*, David Torseth, ed., 1992), p749-756.

Drafting

Surveying Advantage, Robert S. Williams, CC Aug. 92, p1-3,14.

Drag

Bed-Load Transport on Transverse Slope. I, Masato Sekine and Gary Parker, HY Apr. 92, p513-535.

Secretary Condestination of Nonlinear Hy-

Equivalent Statistical Quadratization of Nonlinear Hydrodynamic Loads on TLPs, Ahsan Kareem and Yousun Li, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p890-905.

Structural Considerations in the Design of a Mars Mission Aerobrake, John Hairr and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p873-884.

Drag coefficient

Broadside Current Forces on Moored Ships, William N. Seelig, David Kriebel and John Headland, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p326-340.

1972), p320-340.

Current Blockage Effects on Model-Scale Offshore Platform, Timothy D. Finnigan, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p294-310.

Drag Coefficient and Fall Velocity of Nonspherical Particles, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY May 91, p660-667.

Offia, 111 May 91, poot-oot.

Experimental Characterization of Jet Forces on Waste
Tank Components, Judith Ann Bamberger, James M.
Bates and E. Dale Waters, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p628-635.

Adaptation of Horton and SCS Infiltration Equations to Complex Storms, Gert Aron, IR Mar./Apr. 92, p275-284.

Aldicarb Transport in the Coastal Plain of N. C. C. L. Munster, R. W. Skaggs, J. E. Parsons, R. O. Evans, J. W. Gilliam and E. W. Harmsen, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p419-424.

the Application of UNET to a Complex Channel Network, Marc C. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1148-1153.

Applications of Remote Sensing to Drainage, Sun F. Shih, Edwin T. Engman and Christopher Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p547-552. Automated Delineation of Catchment Area Boundaries with TINs, Norman L. Jones and James Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p347-352.
Discharge Capacity for Curb-Opening Inlets, Ali Uyumaz, HY July 92, p1048-1051.
Drainage Analysis Usins Triangulated Irregular Net-

maz, HY July 92, p1048-1051.

Drainage Analysis Using Triangulated Irregular Networks, Norman L. Jones and James Nelson, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p719-726.

Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, Siew-Ann Tan, Kee-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p209-228.

Drawdown Solutions with Variable Drainable Porosity, Ravi S. Pandey, Ashim K. Bhattacharya, Om P. Singh and Suresh K. Gupta, IR May/June 92, p382-396.

Dry Creek Watershed Flood Control Plan: A Case Study,

and Suresh K. Gupta, IR May/June 92, p382-396.

Dry Creek Watershed Flood Control Plan: A Case Study, 
Eric S. Cyde, M. N. Saquib and Dennis J. Huff, (Water 
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad 
Karamouz, ed., 1992), p287-292.

A Dual Level Methodology for Stormwater Detention 
Basin Design, Donald V. Chase and Lindell E. 
Ormsbee, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p849-854. 
Ecuador—The Lower Guyays Flood Control and Drainage Project—A Case Study, Peter Wittenberg and Waiter Chs. (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, 
ed., 1992), p275-280. 

Effects of Drainage and Water-Management Practices on

Effects of Drainage and Water-Management Practices on Hydrology, K. D. Konyha, R. W. Skaggs and J. W. Gil-liam, IR Sept./Oct. 92, p807-819.

liam, IR Sept./Oct. 92, p807-819.

Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p25.

Environmental Impacts of Agricultural Drainage, R. W. Skaggs, M. A. Breve and J. W. Gilliam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p19-24.

Evaluating the Hydrologic Functions of Wetlands, Abiola A. Akanbi and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487.

Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineer-Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineer-Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineer-

Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

Flow Capacity Effect on Vertical Drain Performance, R. Robert Goughnour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p993-1005.

Hydraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rice, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-1364.

1309.
Hydrologic Model for Drained Forest Watershed, E. J. McCarthy, J. W. Flewelling and R. W. Skaggs, IR Mar/Apr. 92, p242-255.
Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p171-176.

Including Uncertainty of Hydraulic Conductivity into Drainage Design, J. Gallichand, D. Marcotte and S. O. Prasher, IR Sept./Oct. 92, p744-756. Integrated Drainage Design, Bernard L. Golding, CC Dec. 92, p1-6.

Introduction to Remote Sensing for Irrigation and Drainage, Edwin T. Engman and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p529-534.

Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992, 0-87262-877-9, 634pp.

Irrigation and Drainage—Systems Policy Analysis and India Case Study, Mahesh C. Chaturvedi, WR July/ Aug. 92, p445-464.

Irrigation, Drainage, and Landscaping for Expansive Soil, Robert W. Day, IR Mar./Apr. 92, p285-290.

Jury Verdict: Frequency versus Risk-Based Culvert Design, Gary L. Lewis, WR Mar./Apr. 92, p166-184.

Landfill Storm Water Runoff Control, Paul Makowski and Daniel Pazdersky, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p423-428.

Landslide Hazard Analysis for Pipeline Design, North-east Utah, Jeffrey R. Keaton, Robert M. Robison and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204.

Levee/Floodwall Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808.

Management of Agricultural Drainage Pollution Considering Regional Cooperation, T. C. Lyons and M. E. Grismer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p448-455.

Modeling Flow and Flood-Plain Storage in a Tidally Affected River, A. G. Strickland and Jerad D. Bales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1130-1135.

Overseas Perspectives for Managing Irrigation Drainage in California, Emery M. Roe, IR May/June 91, p350-

360.

Overview of Permeable Bases, Robert H. Baumgardner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p275-287.

Pavement Subdrainage Instrumentation in Indiana: A Case Study, T. D. White and Zubair Ahmed, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p415-425.

Performance of Free Draining Base Course at Fort Campbell, Kentucky, William P. Grogan, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-448.

Physical Modeling of a High Velocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Ir. and Robert U. Castle, (Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1902). ed. 632 1992), p618-623.

Pilot-scale Anaerobic Biological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapil Sabharwal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450.

Probabilistic Design of Open Drainage Channels, Said M. Easa, IR Nov./Dec. 92, p868-881.

Relating Crop-Yield Response to Water-Table Fluctua-tions, H. M. Kandil and L. S. Willardson, IR Jan./Feb. 92, p113-121.

Reuse Simulation in Irrigated River Basin, L. K. Smede-ma, W. Wolters and P. J. Hoogenboom, IR Nov/Dec. 92, p841-851.

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p599-605.

Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Perform-ance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1050-1065.

Stability of Concrete Gravity Dams with Drained and Fi-nite Cracks, Bernard Amadei and Tissa Illangasekare, EY Dec. 92, p149-163.

Stabilizing Drop Structure by Drainage Modifications, Larry D. Armer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p39-44.

Task Committee Report on Urban Hydrology Chapter, David F. Kibler, A. Osman Akan, Christopher B. Burke, Mark W. Gildden, Gert Aron, Richard H. McCuen and Andrew J. Reese, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p725-728.

Trends in Streamflow Due to Wetland Drainage, Abdul Khan and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p476-481.

ed., 1992), p476-481.

Trickie Channel Rehabilitation, Mark R. Hunter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p504-599.

Unsteady Drawdown of Water Table, M. Emin Savci, IR July/Aug, 90, p508-526.

The Use of Vibro Systems in Seismic Design, Roberto A. López and Robert F. Hayden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1433-1445.

Verification of an Alluvial Fan Drainage Design Method-

riouz, cu. and man Juran, ed., 1992), p1433-1445. Verification of an Alluvial Fan Drainage Design Methodology for Transportation Alignments, Syndi J. Filippin and Richard H. French, (Hydraudic Engineering: Soving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p575-580.

1992), p575-580.
Water Quality Effects on Eucalyptus ET. Allen Dong, Kenneth Tanji, Steve Grattan, Fawzi Karajeh and Marc Parlange, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p164-170.
Water Quantity and Quality for Irrigated Agriculture and Wetlands, E. P. Chambers and J. C. Guitjens, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p431-436.

Search of Solutions, ted Enginesis, etc., 1772, p. 17-17-18.

The Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik, (Water Resources Planning and Management: Saving a Treatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412

Regional Methods for Design Floods in Australia, David H. Pilgrim, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1-6.

Drainage density

Applications of Remote Sensing to Drainage, Sun F. Shih,
Edwin T. Engman and Christopher Neale, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p547-552.

Drainage structures
Automated Diffusion Wave Modeling of Watershed Hydraulic, Robert N. Eli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 122, 224

Data, Albert H. Halff, Henry M. Halff and Juan S. Ro-driguez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p487-492.

Stabilization of Tablachaca Dam Landslide, Richard A. Millet, Gil M. Lawton, Pedro C. Repetto and Vinod K. Garga, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1365-1381.

Dividing Flow in Open Channels, Amruthur S. Ramamurthy, Duc Minh Tran and Luis B. Carballada, HY Mar. 90, p449-455.

Drop Manholes in Supercritical Pipelines, George C. Christodoulou, IR Jan./Feb. 91, p37-47.

Integrated Drainage Design, Bernard L. Golding, CC Dec. 92, p1-6.

Short-Duration Rainfalls in Sicily, Giovanni B. Ferreri and Vito Ferro, HY Mar. 90, p430-435.

Drainage wells
Two New Specialty Geotechnical Processes for Slope Stabilization, Donald A. Bruce, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1505-1519.

Drains
Basic Properties of Sand and Gravel Filters (Paper introduced by James R. Talbot), James L. Sherard, Lorn P.
Dunnigan and James R. Talbot, (Embankment
Dams—James L. Sherard Contributions, Sukhanander
Singh, ed., 1992), p366-383.
Design of Transient and Steady State Drain Spacing, Ly-

Earns—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p366-383.

Design of Transient and Steady State Drain Spacing, Lyman S. Willardson and Masoud Alemi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p57-62.

Drawdown Solutions with Variable Drainable Porosity, Ravi S. Pandey, Ashim K. Bhattacharya, Om P. Singh and Suresh K. Gupta, IR May/June 92, p382-396.

Flow Capacity Effect on Vertical Drain Performance, R. Robert Goughnour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p993-1003.

LASSAP, Stress and Settlement Analysis and Design Program, Clarence Jiang, K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodono, ed. and Jeff R. Wright, ed., 1992), p930-943.

Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

Physical Modeling of a High Velocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Jr. and Robert U. Castle, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p618-623.

Drawdown

Drawdown
Characteristics of Waves and Drawdown Generated by
Barge Traffic on the Upper Mississippi River System,
Ta Wei Soong and Nani G. Bhowmik, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p672-676.
Drawdowns for Constant-Discharge One-Dimensional
Leaky Aquifer, Louis H. Motz, IR May/June 90, p456461

Drawdowns for Nonleaky Aquifer Flow with Storage in Finite-Width Sink, Louis H. Motz, IR July/Aug. 92,

p645-651. Groundwater Management in Southern Florida, Mark M. Wilsnack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p104-109. Movement of Slopes During Rapid and Slow Drawdown, Ronaldo I. Borja and Sunil S. Kishnani, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404-413.

413.

413.
Return Flows in Large Rivers Associated with Navigation Traffic, Nani G. Bhowmik, B. S. Mazumder and Ta Wei Soong, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p760-765.
Study of Groundwater Availability in Case of Drought, Tiao J. Chang and Choo B. Teoh, (Water Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p130-137.
Unsteady Drawdown of Water Table, M. Emin Savci, IR July/Aug. 90, p508-526.

Drawings Fax Network On-Line for Large Documents, CE July 92, pil.

p11. Dredge spoil Analysis of Dredged Material Deposition Patterns, Eric E. Nelson and Billy H. Johnson, (Ports '92, David Torseth, ed., 1992), p470-479. The Application of Ultrasonic Surface Detectors to Hopper Dredge Production Monitoring, Stephen H. Scott and Angela Freeman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p1018-1023.
Bodkin Island Wetland Restoration Project Design, Jack

p1018-1023.
Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A. Evans and Robert Blama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-355.

Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992), p548-562.

p348-562. Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Mohammed N. Chang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p975-988. Environmental Engineering Options for Managing Contaminted Sediment, Norman R. Francingues, Jr. and Daniel E. Averett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p994-999

Interpreting Dredge Material Bioassay Data—COBIAA, Charles H. Lutz, Thomas M. Dillon, Mark H. Houck and Jeff R. Wright, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Modeling Dredged Material Disposed in Open Water, B. H. Johnson, D. N. McComas and D. C. McVan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1036-1041.

G. Bhowmik, ed., 1992), p103-1041.

A Numerical Simulation Approach to Estimating Disposal Site Stability, Norman W. Scheffner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1006-1011.

Bhowmik, ed., 1992), p1007-1011.
An Overview: Wetland Restoration, Protection, and Establishment by Beneficially Using Dredged Material, Mary C. Landin, Thomas R. Patin and Hollis H. Allen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p114-118.

mand Adramouz, ed., 1992, p114-118.
Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silverston and Mark Easley, (Waler Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361.

Subaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744.

The Application of Ultrasonic Surface Detectors to Hop-per Dredge Production Monitoring, Stephen H. Scott and Angela Freeman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), Jennings, ed p1018-1023.

Predicting Effluent PCBs From Superfund Site Dredged Material, Edward L. Thackston and Michael R. Paler-mo, EE Sept./Oct. 92, p657-665.

An Acoustic Impedance Method for Subbottom Material Characterization, Richard G. McGee and Robert F. Baliard, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1030-1035.

1033. Analysis of Dredged Material Deposition Patterns, Eric E. Nelson and Billy H. Johnson, (Ports '92, David Torseth, ed., 1992), p470-479. The Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412.

Channel Restoration Above Elephant Butte Reservoir, Christopher A. Gorbach, (Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p114-119.

Design and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p554-570.

A Design Manual for Coastal Fluidization Systems, Richard N. Weisman, Gerard P. Lennon and James E. Clausner, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), 9862-878.

Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (*Ports* '92, David Torseth, ed., 1992), p275-287.

Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992), p548-562

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, James D. Bowen, Steven H. Wolf and Curtis A. Meininger, (Ports '92, David Torseth, ed., 1992), p443-455.

1992), p443-455.

An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536.

Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Mohammed N. Chang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p75-988.

Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

Evaluation of Proposed Port Facilities, Charleston Har-bor, South Carolina, Samuel B. Heltzel, (Ports '92, David Torseth, ed., 1992), p791-801.

David Iorsein, ed., 1992, 1971-801.
Hydraulic Controls on Delaware Estuary Water Quality, Joseph L. DiLorenzo, Georgia R. Marino, Poshu Huang, Tavit O. Najarian and M. Llewellyn Thatcher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p151-157.

and Nani G. Bhowmik, ed., 1992), pl 51-157.
Hydraulic Engineering; Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.
Hydrodynamic and Water Quality Modeling of Lower
Green Bay, David J. Mark and Barry W. Bunch, Extra
arine and Coastal Modeling, Malcoim L. Spaulding,
ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992, p657-668.
Land Reclamation Design for the Port of Los Angeles'
2020 Plan, J. Warwar and R. Wittkop, (Ports' 92,
David Torseth, ed., 1992), p577-590.
Longshore Sediment Transport Rate at Morro Bay. CA.

David Torseth, ed., 1992), p577-590.

Longshore Sediment Transport Rate at Morro Bay, CA, James M. Kaihatu, Chris Andrassy and Edward F. Thompson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p61-631.

Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, J. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p236-259.

Multiuser Sites for Contaminated Sediment Discount

Multiuser Sites for Contaminated Sediment Disposal, Pieter N. Booth and Kimberly A. Henson, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p96-101.

Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.

ed., 1992), po.30-643.

A Numerical Simulation Approach to Estimating Disposal Site Stability, Norman W. Scheffner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1006-1011.

Bhowmik, ed., 1992), p1006-1011.

Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p418-429.

Pier and Wharf for U.S. Navy Homeport, Everett, Arnfina Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (Ports '92, David Torseth, ed., 1992), p616-629.

Ports '92, 2 vols. David Torseth ed., 1992, 9-3756, 874.

Ports '92, 2 vols., David Torseth, ed., 1992, 0-87262-874-4, 1212pp.

Rock Creek—Cresta Sediment Management Plan, Larry L. Harrison, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamoux, ed., 1992), p102-107.

Santa Barbara Harbor Assessment of Shoaling Frequency, Russell H. Boudreau, Alan Alcorn and Stephen Fine, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p447-461. Stephenson Stephenson Single Reach with Uncertainty, Jay R. Lund, WW Mar/Apr. 90, p211-

231.

231.
Sediment Sampling Techdniques in Complex Environments, John J. Nocera, Gregory P. Matthews and Thomas M. Simmons, (Environmental Engineering Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p92-97.
Seismic Survey Considerations in the Planning and Design of Dredging Projects for Marine Terminal Facilities, Charles J. Natale, Jr., Thaddeus A. Nowak, Jr. and Bruce A. Adams, (Ports '92, David Torseth, ed., 1992), p456-469.
Session Report—Natural and Man-Made, Harards and Session Report—Natural and Man-Made, Harards and

p456-469.

Session Report—Natural and Man-Made Hazards and Risk of Extreme Events, Jim Lambert, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p358-359.

Should the U.S. Accept the Concept of Navigable Depth? John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Teeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1608-1082.

Submarine Flow Silde in Puget Sound, Leland M. Kraft, Jr., Thomas M. Gavin and Jon C. Bruton, GT Oct. 92, p1577-1591.

p1577-1591.

Tidal Influence on the Stratification of the Miramichi Estuary, A. St-Hilaire, C. Bettignies, D. Booth and E. M. P. Chadwick, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p953-958.

Using a Numerical Model to Evaluate Dredging Options, Ronald R. Copeland, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1024-1029.

Wave Interaction with Fluid Mud in Rectangular Trench, Francis C. K. Ting, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p75-

Drift

Drift
Coupled Heat and Moisture Transport Model for Underground Climate Prediction, G. Danko and P. Mousset-Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p790-798.

Instability of Buildings Subjected to Earthquakes, Dionisio Bermal, ST Aug. 92, p2239-2260.

Model Development for Operational Use to Help Spill Combating and Sea Rescue, Heimo Vepsä, Erkki Alassarela and Juha Sarkkula, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p149-156.

Positive Drift of a Backward-Bent Duct Barge, Michael E. McCormick and William E. Sheehan, WW Jan/Feb. 92, p106-111.

McCornic. 92, p106-111.

Drilled shafts

Drilled shafts
Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.
Design of Socketed Drilled Shafts in Limestone, M. C. McVay, F. C. Townsend and R. C. Williams, GT Oct. 92, p1626-1637.
Use of Drilled Shafts in Stabilizing a Slope, Lymon C. Reese, Shin-Tower Wang and Jeffrey L. Fouse, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332.

Drilling
Case Study of an Offshore Horizontal Boring, John T.
Robinson, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), 697-712.
Drillers Offer Disaster Assistance (ltr), S. Scot Litke, CE

Drillers Offer Disaster Assistance (187), S. Scot Litke, CE June 92, p37.

Dynamic Response Characteristics of Jack-Up Drilling Units, David T. McDonald and Robert G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p906-920.

In Situ Recovery of Water from Dormant Cornet Cornes &

CI Carbonaceous Chondrites, David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2367-2381.

Progress and Developments in Dam Rehabilitation by Grouting, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p601-613.

Recent Progress in American Pinpile Technology, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p765-777.

Driven piles

Juran, ed., 1992, p.765-777.
Driven piles
Bearing Capacity of Expanded-Base Piles in Sand, William J. Neely, GT Jan. 90, p.73-87.
Driving Characteristics of Open-Toe Piles in Dense Sand, Richard D. Raines, Oscar G. Ugaz and Michael W. O'Neill, GT Jan. 92, p.72-88.
Load Transfer for Pipe Piles in Highly Pressured Dense Sand, Michael W. O'Neill and Richard D. Raines, GT Aug. 91, p.1208-1226.
Minipile Milestone in Memphis, Loren D. Flick, A. E. "Ted" Graham, Michael J. Marasa, Nigel B. R. Osborn and Frank T. Tobey, Ill., CE Sept. 92, p.46-49.
Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, Kevin A. Pierce and Laszlo Buzasi, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.663-679.
Performance of Axially Loaded Pipe Piles in Sand, Leland M. Kraft, Jr., GT Feb. 91, p.272-296.
Performance of Precast Driven Piles in Marine Clay, Chun F. Leung R. Radhakrishnan and Siew-Ann Tan, GT Apr. 91, p.637-657.
Soil Plug Response in Open-Ended Pipe Piles, M. F. Randolph, M. May, E. C. Leong, A. M. Hyden and J. D. Murff, GT May 92, p.743-759.

Driver behavior
Exact Minimum Sight Distance on Sag Curve with Centered Overpass, Said M. Easa, TE July/Aug. 92, p588-

Identification of Inappropriate Driving Behaviors, John M. Mason, Jr., Kay Fitzpatrick, Deborah L. Seneca and Thomas B. Davinroy, TE Mar/Apr. 92, p281-298.

Is Stop and Go Better Than Easing the Flow? (Itr), Eugene H. Harlow, CE July 92, p36,38.

Quantification of Agency and User Values of Pavement Performance, T. F. Fwa and K. C. Sinha, TE Jan./Feb. 92, p84-98.

Drogues Diffusion and Dispersion in Coastal Waters, E. John List, Gregory Cartrell and Clinton D. Winant, HY Oct. 90, p1158-1179.

p1158-1179.

Drop structures

Analysis of ARS Low-Drop Grade-Control Structure,
Steven R. Abt, Mark R. Peterson, Chester C. Watson
and Scott A. Hogan, Hy Oct. 92, p1424-1434.

Analysis of Spiral Vortex and Vertical Slot Vortex Drop
Shafts, Michael C. Quick, Hy Mar. 90, p309-325.

Comparison of ARS-Type Grade Control Model Testing
and Prototype Response, C. Watson, N. Raphelt, P.
Combs and S. Abt, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p213218.

218. Scour Downstream of Grade-Control Structures, Noel E. Bormann and Pierre Y. Julien, HY May 91, p579-594. Stabilizing Drop Structure by Drainage Modifications, Larry D. Armer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p39-44.

man, ed., 1992), p39-44.

Droughts
The 1991 Revolution in Water Management, George R.
Baumli, (Water Resources Planning and Management:
Saving a Threatened Resource-In Search of Solutions,
Mohammad Karamouz, ed., 1992), p322-327.

--Day 10-Y-Low Flow Relationships for Ungauged Sites
in Central Italy, Piergiorgio Manciola and Stefano
Casadei, (Irrigation and Drainage: Saving a Threatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), p250-256.
The Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman
and Andrew Dzurik, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p407-412.

Decision Support System for Crop Planning during
Droughts, H. Raman, S. Mohan and N. C. V. Rangacharya, IR Mar/Apr. 92, p229-241.

The Drought Occurrence and Response Measures in Taiwan Area, 1991, Hong-Hsi Hsu and Jinn-Chuang Yang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p977-987.

Effect of Drought on Urban Water Supplies. I: Drought Analysis, David M. Frick, Dennis Bode and Jose D. Salas, HY June 90, p733-753.

Hydrological Aspects of Droughts, A. R. Rao and A. Al-Wagdani, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p343-4340.

Liner Helps Resort Survive Drought, CE Oct. 92, p88.

A Markov Chain Approach for Analyzing Palmer Drought Index, Marcel K. Tchaou, Saied Mostaghimi and G. V. Loganathan, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p341-346.

Meteorological Aspects of Drought, Richard L. Eddy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p329-333.

Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monscone

source—In Search of Solutions, Ted Engman, ed., 1992), p329-333.

Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monsoon Climate of Tamil Nadu, India, Charles Rodgers and Mark Svendsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347.

Operation of the Central Valley Project During California's Drought, John F. Burke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p348-353.

Operation of the Tennessee Valley Authority Water Control System Under Extreme Drought Conditions, H. Morgan Goranfio, Jr., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-365.

Probability and Climatology of Droughts in the Western United States, Hugo A. Loaiciga, (Water Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p191-129.

Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warner, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-779.

Stochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/

Aug. 92, p527-542.

Lands, D. Mukherjee and N. T. Kottegoda, IR July/
Aug, 92, p527-542.

A Stochastic Water Quality Model for Urban Watersheds,
D. E. Barbé, J. F. Cruise and X. Mo, (Hydraulic Engimeering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p791-796.

Study of Groundwater Availability in Case of Drought,
Tiao J. Chang and Choo B. Teoh, (Water Resource:
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamoux, ed., 1992), p130-137.

Water Management Under Drought Conditions: An
Overview of Practices by Non-Federal Entities, Darrell
G. Fontane and Donald Frevert, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p354-359.

Water Management Under Drought Conditions an Overview of Practices by Federal Agencies, Donald K.
Frevert and Darrell G. Fontane, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p501-605.

Water Supply Operations During Drought, Jhih-Shyang
Shih and Charles ReVelle, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p310-315.

Drug addiction

Drug addiction

Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Drydocks
Port of Portland's Berth 601 Floating Dock, Elmer W. Ozolin and Walter R. Haynes, (Ports '92, David Torseth, ed., 1992), p150-163.
A Removable Submarine Cover for Drydock No. 2 Modernization, Ted Bobroski and Joseph J. Bonasia, (Ports '92, David Torseth, ed., 1992), p506-519.

Ductility

Analytical Moment-Curvature Relations for Tied Concrete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544.

Beam Strength Enhancement at Design Ductility Factor Demands, Gaetano Russo, ST Dec. 90, p3402-3416.

Behavior of Externally Confined Concrete Columns, M. W. Li, H. Saadatmanesh and M. R. Ehsani, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1922), p677-690.

Caltrans to Retrofit Double-Deck Bridges, CE Jan. 92, p14.

p14.

Cyclic Behavior of Extended End-Plate Joints, Ahmed Ghobarah, Robert M. Korol and Ashraf Osman, ST May 92, p1333-1353.

May 92, p1333-1353.

Debonding of a Inhomogeneity from a Plastic Matrix, Alan J. Levy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p252-255. Effect of Micro-parameters on the Macroscopic Behaviour of Ductile Fiber Reinforced Brittle Matrix Composites, Christopher K. Y. Leung and Jeffrey Chi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p744-747.

Evaluation of Seismic Vulnerability of Highway Bridges in the Eastern United States, J. B. Mander, F. D. Panthaki and M. T. Chaudhary, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86.

Experimental Performance of Long Links in Eccentrically Braced Frames, M. D. Engelhardt and E. P. Popov, ST Nov. 92, p3067-3088.

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski Brown, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992),

ciencies and Failures, Thomas D. White, ed., 1992), p691-695.

Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou, Nikolaos Plevris and Nikola Deskovic, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717.

Normalizing Inelastic Seismic Response of Structures Having Eccentricities in Plan, Michel Bruneau and Stephen A. Mahin, ST Dec. 90, p3358-3379.

Reliability Consideration in Shakedown Analysis, K. C. Chou and T. V. Galambos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p204-207.

Reliability Model for Bridge Columns under Seismic Loads, Michel Ghosn and Ge Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p168-171.

Seismic Panel Zone Design Effect on Elastic Story Drift in Steel Frames, Keh-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

Strength and Ductility of Confined Concrete, Murat Saaticoglu and Salim R. Razvi, ST June 92, p1590-1607.

Strength of Concrete-Filled Thin-Walled Steel Box Col-umns: Experiment, Hanbin Ge and Tsutomu Usami, ST Nov. 92, p3036-3054.
The Use of Vibro Systems in Seismic Design, Roberto A. López and Robert F. Hayden, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1433-1445.

Dunes
Computation of Flow in Ice-Covered Dune-Bed Channels, J. Y. Yoon, V. C. Patel and R. Ettema, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p385-388.

Design of Protective Dunes at Dam Neck, Virginia, John R. Headland, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p251-267.

Development of Bed Features, Arved J. Raudkivi and Hans-H. Witte, HY Sept. 90, p1063-1079.

Dust
Bulk Commodity Terminals—Planning for the Future
Competitive and Environmental Challenges, Gordon
W. Zonailo, (Ports '92, David Torseth, ed., 1992),
p695-708.

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

53. Dust Control Research for SEI, Kriss J. Kennedy and Jeffrey R. Harris, Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p398-407.

Dust Controller Keeps it Down, CE Aug. 92, p77.
Impact Craters on Cosmic Dust: Do Damage to the Spacecraft, Hanchang Peng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p969-

974.
Mars Containers: Dust on Teflon Sealing Surfaces, H. V. Lauer, Jr. and J. H. Allton, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p508-517.
Mitigation of Adverse Environmental Effects on Lunar-Based Astronomical Instruments, Charles L. Johnson, Kurtis L. Dietz, T. W. Armstrong and B. L. Colborn, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-1841.
Mitigation of Dust, Contemposition During EVA Opera-

Miller, ed., 1992.), p1832-1841.
Mitigation of Dust Contamination During EVA Operations on the Moon and Mars, Peter E. Glaser, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992.), p1512-1522.
Miller, ed., 1992.), p1512-1522.

Miller, ed., 1992), p1512-1522.

Mobilization and Removal of Contaminants Associated with Urban Dust and Dirt, Brian A. Dempsey, Yuan-Liang Tai and Stuart Harrison, (Environmental Engineering, Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p486-491.

Spiral Mining for Lunar Volatiles, H. H. Schmitt, G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170.

Technology—Key to Environmental Success. Paul Socres.

Technology—Key to Environmental Success, Paul Soros, (Ports 92, David Torseth, ed., 1992), p189-202.

Dutton, Benson L., Sr. Dutton, Tennessee Educator, Dies at 82, NE Apr. 92, p5.

Dye studies

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Measuring Ozone by Indigo Method: Interference of Sus-pended Material, Mary E. Williams and Jeannie L. Darby, EE Nov./Dec. 92, p988-993.

Dynamic analysis

3D Frequency Domain Analysis of Offshore Structures, J. F. McNamara and M. Lane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p192-195.

3D Inelastic Dynamic Analysis of RC Structures, Roy F. Lobo, Sashi K. Kunnath and Andrei M. Reinborn, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p905-912.

An Alternative Analysis of Vibration Tests on Two Pile Group Foundations, Alex Sy, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p136-152.

Computer Modeling Analysis for Highway Steel Bridge Vibration, Ton-Lo Wang, Mohsen Shahawy and Dong-zbou Huang, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p679-686.

Goodno, ed. and Jeff K. Wright, ed., 1992.), po 79-886.

A Coordinate Reduction Technique With Mass Correction for Dynamic Analysis of Structural Systems, Wenlung Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p61-64.

Dynamic Analysis of Rigid Airport Pavements with Discontinuities, Anant R. Kukreti, Mohammad R. Taheri and Ragnar H. Ledesma, TE May/June 92, p341-360.

Dynamic Analysis of Sliding Seismic Isolators, Navin-chandra Amin, Anoop Mokha, Stanley Low and Victor Zayas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p320-323.

Dynamic Parameters Analysis of Piles, Xiao M. Zhu, Hsien P. Niu and Suo X. Zhang, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p224-240.

Dynamic Response of Multigirder Bridges, Ton-Lo Wang, Dongzhou Huang and Mohsen Shahawy, ST Aug. 92, p2222-2238.

Dynamic Stiffness Analysis of Concrete Pavement Slabs, N. McCavitt, M. R. Yates and M. C. Forde, TE July/ Aug. 92, p540-556.

Dynamics of Saturated Rocks. IV: Column and Borehole Problems, Irene Vgenopoulou and Dimitri E. Beskos, EM Sept. 92, p1795-1813.

EM Sept. 92, p1795-1813.

Exact Nonstationary Response of a Sliding Rigid Structure to a Modulated White Noise Base Excitation, Marc P. Mignolet and Guangwuu W. Fan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p408-411.

Free Vibration Analysis of Curved Thin-Walled Girder Bridges, Chang-Huan Kou, Steven E. Benzley, Jian-yuan Huang and D. Allan Firmage, ST Oct. 92, p2890-2910.

p2890-2910.

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401.

Impact Analysis of Continuous Multigirder Bridges due to Moving Vehicles, Dongzhou Huang, Ton-Lo Wang and Mohsen Shahawy, ST Dee. 92, p3427-3443.

Inelastic Response of Variable Stiffness Members under Cyclic Loading, Demeter G. Fertis and Chin T. Lee, EM July 92, p1406-1422.

Modal and Response Analyses of a Paper Machine Foundation, Jerry Chen and J. A. Bohinsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p574-581.

Modal Synthesis Method for General Dynamic Systems.

Modal Synthesis Method for General Dynamic Systems, L. E. Suarez and M. P. Singh, EM July 92, p1488-1503. Neural Networks in Dynamic Analysis of Bridges, Stuares S. Chen and Ketan Shah, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1058-1065.

1992b, p1038-1005.
Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, Loai El-Gazairly, Barry Goodno and James Craig, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p896-904.

1992, p896-904.
Probabilistic Rotordynamics Analysis Using an Adaptive Importance Sampling Method, Y.-T. Wu, T. Y. Torng, O. H. Burnsic and M. H. Rheinfurth, (Probabilistic Mechanics and Siructural and Geotechnical Relability, Y. K. Lin, ed., 1992), p491-494.
Pseudoforce Method of Solution for Highly Nonlinear Systems, Satish Nagarajaiah and Andrei Reinhorn, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p913-920.
Response of Systems with Uncertain Parameters to Stochastic Excitation, H. Jensen and W. D. Iwan, EM May 92, p1012-1025.

92, p1012-1025.

Seismic Response of R/C Frames with Irregular Profiles, Sharon L. Wood, ST Feb. 92, p545-566.

Soil-Pile-Superstructure System in Liquefaction, S. Yao and K. Kobayashi, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p241-255.

Wind-Induced Response of Structurally Asymmetric High-Rise Buildings, M. Saiful Islam, Bruce Elling-wood and Ross B. Corotis, ST Jan. 92, p207-222.

Dynamic characteristics

Finite-Strip Free-Vibration Analysis of Wood Floors, A. Filiatrault, B. Folz and R. O. Foschi, ST Aug. 90, p2127-2142.

A Cumulative Failure Criterion of Concrete Under Uniaxial Dynamic Compressive Loading. Tianxi Tang and Dan G. Zollinger, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p860-

Design Live Loads for Coherent Crowd Harmonic Move-ments, A. Ebrahimpour and R. L. Sack, ST Apr. 92, p1121-1136.

Dynamic Response of an Infinite Beam Supported by a Fluid, Z. G. Zhao and J. P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p341-344.

Dynamic Response of Multigirder Bridges, Ton-Lo Wang, Dongzhou Huang and Mohsen Shahawy, ST Aug. 92, p2222-2238.

Dynamic Response of Uncertain Two-Dimensional Structures, C. G. Bucher and C. E. Brenner, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p132-135.

Dynamic Soil-Pile-Structure Interaction—The State-of-Practice, Asadour H. Hadjian, Richard B. Fallgren and Mark R. Tufenkjian, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p1-26.

Dynamic Stresses in Granular Assemblies with Micro-structural Defects, A. Shukla, C. Y. Zhu and Y. Xu, EM Jan. 92, p190-201.

Evaluation of Flowable Fly-Ash Backfill. II: Dynamic Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p464-474.

Finite Element Dynamic Reliability Analysis with Con-densation, Sankaran Mahadevan and Sandeep Mehta (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p332-335.

First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Kiureghian, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p531-534.

Impact Analysis of Continuous Multigirder Bridges due to Moving Vehicles, Dongzhou Huang, Ton-Lo Wang and Mohsen Shahawy, ST Dec. 92, p3427-3443.

and women snamwy, 51 Dec. 72, portains and women snamwy, 51 Dec. 72, portains and Strain Measurements in Dynamically Loaded Asphalt Pavement Structures, C. H. Vogelzang and S. R. Bouman, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p244-260.

Load and Temperature Measurements for a Study of Rut-ting Under High-Pressure Tires, William C. Dass, Su-san M. Dass and James G. Murfee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212.

Nonlinear Soil-Pile Interaction Model for Dynamic Lateral Motion, Toyoaki Nogami, Jun Otani, Kazuo Konagai and Hsiao-Lian Chen, GT Jan. 92, p89-106.

Observed and Predicted Response of Piles Under Dynamic Loads, Vijay K. Puri and Shamsher Prakash, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p153-169.

On a Procedure to Estimate the Reliability of Mechanical Components, G. I. Schuëller, C. G. Bucher and H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Pavement Response Measuring System, M. de Beer, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p78-95.

Piles Under Dynamic Loads, Geotechnical Special Publi-cation No. 34, Shamsher Prakash, ed., 1992, 0-87262-905-8, 270pp.

Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079.

Seismic Response of Multianchored Retaining Walls, Thomas J. Siller and Dorothy D. Frawley, GT Nov. 92, p1787-1803.

Shape Optimization of Arch Dams for Static and Dynamic Loads, Bofang Zhu, Bin Rao, Jinsheng Jia and Yisheng Li, ST Nov. 92, p2996-3015.

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Structural Control Design in the Presence of Time De-lays, P. M. Sain, B. F. Spencer, Jr., M. K. Sain and J. Suhardjo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815.

Time Domain Analysis of Dynamically Loaded Single Piles, S. M. Mamoon and P. K. Banerjee, EM Jan. 92, p140-160.

Vibration of a Bridge Under a Random Train of Moving Loads, M. Di Paola and G. Ricciardi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p136-139.

### Dynamic models

The Application of Dynamic Modeling in the Nonde-structive Testing of Roads and Airfields, Mark Ander-son, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p321-335.

Dynamic Fish Growth Modeling for Tailwater Fishery Management, Ming Shiao, Gary Hauser, Gary Chapman, Bruce Yeager, Tom McDonough and Jim Ruane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1136-1141. Dynamic Modeling of VOC Emissions in HPO Process, Chwen-Jeng Tzeng, Roger W. Babcock, Jr., Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p67-72. First and Second Order Dynamic Subgrade Models for Soil-Pile Interaction Analysis, Toyosaki Nogami, Jiang-Xiong Zhu and Takayoshi Ito, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p187-206. Gas Phase Control for Oxygen-Activated Studge, R. C.

Loads, Shamsher Prakash, ed., 1992), p187-206.

Gas Phase Control for Oxygen-Activated Sludge, R. C. Clifft, Ee May/June 92, p390-401.

Updatting Dynamic Models and Their Associated Uncertainties for Structural Systems, J. L. Beck and L. S. Katafygiotis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p681-684.

Updating of Dynamic Structural Systems by Learning, Masaru Hoshiya, Yasuyoshi Obuchi and Shigeru Node, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p124-127.

cui rettabutty, Y. K. Lin, ed., 1992), p124-127.

Dynamic programming
Asgregation-Disaggregation Approach to Multireservoir
Operation, Juan B. Valdés, Jenny Montbrun-Di Filippo, Kenneth M. Strzepek and Pedro J. Restrepo, WR
July/Aug, 92, p423-444.

A Demand Driven Decision Support System for Operation of Reservoirs, Haralambos V. Vasiliadis and
Mohammad Karamouz, (Water Resources Planning
and Management Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
QDtimal Elood Warning Threated A Con South

p301-306. Optimal Flood Warning Threshold: A Case Study in Connellsville, Pennsylvania, Duan Li, Yacov Y. Haimes, Eugene Stakhiv and David Moser, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283.

1772, p.2601-225, p.2601-225, p.261-225, p.2

Performance Evaluation of Lake Shelbyville by Stochastic Dynamic Programming, Han-Lin Lee, Jon C. Liebman and E. Downey Brill, Jr., WR Mar/Apr. 92, p185-204.

Real-Time Operation of Tanshui River Reservoirs, Jan-Tai Kuo, Nien-Sheng Hsu, Wen-sen Chu, Shian Wan and Youn-Jan Lin, WR May/June 90, p349-361.

Reliability of Operating Rules with or without Uncertain Forecasts, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p679-684.

Dynamic properties
Resonant Column Testing of Dynamic Rock Properties,
D. V. Morris and J. G. Delphia, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p527-530.

Soil Behavior from Unconventional Loading Conditions, Kamal Tawfiq, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p272-275.

Dynamic response

Analog Electronic Simulations of a Nonlinear System, R.
Valery Roy and Eric Nauman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p668-671.

Analytical Methods for the Determination of Correlations and Spectra of Nonlinear System Response, R.
Valery Roy and Pol D. Spanos, (Frobabilistic Mechanics and Structural and Georechnical Reliability, Y. K.
Lin, ed., 1992), p412-415.

The Application of Dynamic Modeling in the Nondestructive Testing of Roads and Airfields, Mark Anderson, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed., 1992), p321-335.

Asymptotic Analysis of TLP Tendons and Risers, C. Oran, EM Jan. 92, p56-73.

Oran, EM Jan. 92, 956-73.

Cable-Stayed Bridge Vibration Due to Road Surface Roughness, Ton-Lo Wang and Dongzhou Huang, ST May 92, p1354-1374.

Cone Models for a Pile Foundation, John P. Wolf, Jethro W. Meek and Chongmin Song, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p94-113.

Cone Models for Soil Layer on Rigid Rock. II, Jethro W. Meek and John P. Wolf, GT May 92, p686-703.

Digital Simulation of Wind Load Effects, Ahsan Kareem and Yousun Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p284-287.

Ductility and Detailing Requirements of Besides National Control of Page 1981.

p. 284-287.

Ductility and Detailing Requirements of Bearing Wall Buildings, John W. Wallace and Jack P. Moehle, ST June 92, p1625-1644.

Dynamic Behavior of Nonlinear Cable System. I, S. Mesarovic and D. A. Gasparini, EM May 92, p890-903.

Mesarovic and D. A. Gasparini, EM May 92, p890-903.

Dynamic Behavior of Nonlinear Cable System. II, S. Mesarovic and D. A. Gasparini, EM May 92, p904-920.

Dynamic Effect of Sediment on Dam Hydrodynamics, Bang-Fuh Chen, Kuo-Chyang Chang and Tin-Kan Hung. (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p345-348.

Dynamic Response Analysis of Pile Foundations by Using Variational Calculus, Toyoaki Nogami, Jian-Xiong Zhu and Takayoshi Ito, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p588-591.

Dynamic Response Analysis of Reinforced-Soil Retaining

Dynamic Response Analysis of Reinforced-Soil Retaining Wall, Muthucumarasamy Yogendrakumar, Richard J. Bathurst and W. D. Liam Finn, GT Aug. 92, p1158-

Dynamic Response Characteristics of Jack-Up Drilling Units, David T. McDonald and Robert G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p906-920.

Dynamic Response of an Infinite Beam Supported by a Fluid, Z. G. Zhao and J. P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p341-344.

Dynamic Response of Beams on Elastic Foundation, Yew Chin Lai, Bing Yuan Ting, Woon-Sung Lee and Bryan R. Becker, ST Mar. 92, p853-858.

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

Dynamic Response of Uncertain Two-Dimensional Structures, C. G. Bucher and C. E. Brenner, (Probabilistic Mechanics and Structural and Geneen, (all philips), Y. K. Lin, ed., 1992), p132-135.

Effect of Contraction Joints on Earthquake Response of Arch Dam, Gregory L. Fenves, Soheil Mojtahedi and Richard B. Reimer, ST Apr. 92, p1039-1055.

Richard B. Meller, 31 Apr. 25, proceedings of Foundations, M. H. Maher and J. P. Welsh, (*Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed.*, Robert O. Holtz, ed. and llan Juran, ed., 1992), p855-

Effect of Static Offset on TLP Modeling, C. Oran, EM Jan. 92, p74-91.

Effects of Dead Loads in Dynamic Plates, Hideo Takaba-

take, ST Jan. 92, p34-51

Effects of Liquefaction on Lateral Pile Responses, T. Ka-gawa, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p207-223.

gawa, (ries Oner Dynamic Logas, Shamsher Frakash, ed., 1992), p207-223.

Evaluating Damage Detection in Bridges, David F. Maraurek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p944-947.

An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, Y. Wang and R. K. N. D. Rajapakse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1008-1011.

Experimental and Theoretical Dynamic Compliances of Foundations, Ronald Y. S. Pak and Bojan B. Guzina, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p596-599.

Extended Split-Hopkinson Bar Analysis for Attenuating Materials, Conrad W. Felice, Edward S. Gaffney and Joseph A. Brown, EM May 91, p1119-1135.

First and Second Order Dynamic Subgrade Models for Soil-Pile Interaction Analysis, Toyoaki Nogami, Jiang-Xiong Zhu and Takayoshi Ito, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p187-206.

Flexible Membrane Wave Barrier, Gary O. Thompson, Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992, p. 129-148.

Frictional Aspect of Rocking-Sliding of a Rigid Block with Surface Impact, Majid Shekarian, Joel P. Comt and Pol D. Spanos, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-331

and Poi D. Spanos, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-331.

Improved Time-History Analysis for Structural Dynamics Calculations, C.-C. Chen and A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p449-452.

Influence of ADAS Element Parameters on Building Seismic Response, Chuan Xis and Robert D. Hanson, ST July 92, p1903-1918.

Instability of Buildings Subjected to Earthquakes, Dionisio Bernal, ST Aug. 92, p2239-2260.

Large-Displacement Effects on Dynamic Response of Eccentric Buildings, Lidia La Mendola and Maurizio Papia, EM May 91, p934-973.

Linear System Spectral Moments Determination, Pol D. Spanos and Scott M. Miller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p192-195.

Low-Order Interpolation Functions for Curved Beams, S. J. Pantazopoulou, EM Feb. 92, p329-350.

Masonry as a Structural Material, Daniel P. Abrams, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p116-129.

Measurement of Airfield Pavement Response Under Moving Aircraft Loads, Dennis R. Hiltunen and Albert J. Bush, Ill., (Road and Airport Pavement Response Monitoring of Structures, George Hearn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p940-943.

Modal Analysis of Vibration Response for Condition Monitoring of Structures, George Hearn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p453-456.

Modal Identification Algorithm with Unmeasured Input, C. F. Cremona and J. A. Brandon, AS Oct. 92, p442-

Modifications to Coal Pier 6 Made Necessary by a Deeper Channel, Zolan Prucz, Barney T. Martin and Jerry L. Richstein, (Ports '92, David Torseth, ed., 1992), p164-

177.
Multiple Modes of Steady-State Slide-Rock Response, Harry W. Shenton, III. and Nicholas P. Jones, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p312-315.
Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodriguez, Maria C. Arbelaez, Takenori Satoh and Edward Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992), p390-402.
Nonlinear Dynamic Response of Framed Structures

DSM-402. Nonlinear Dynamic Response of Framed Structures Using the Mode Superposition Method, Mohamed W. Fahmy and Ahmad H. Namini, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p457-460.

1992), p457-460.

Nonlinear Soil-Pile Interaction Model for Dynamic Lateral Motion, Toyoaki Nogami, Jun Otani, Kazuo Konagai and Hsiao-Lian Chen, GT Jan. 92, p89-106.

Nonstationary Response of Structures with Closely Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.

Numerical and Analytical Description of Highway Surface Roughness, Ton-Lo Wang, Mohsen Shahawy and Dongzhou Huang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p309-316.

Numerical Simulation of Dynamic Shear Tenefor T.

p309-316.

Numerical Simulation of Dynamic Shear Transfer, T.

Krauthammer and A. Koubsa, (Nondestructive Testing
of Concrete Elements and Structures, Farhad Ansari,
ed. and Stein Sture, ed., 1992), p139-149.

Numerical Solution of the Transient Fokker-Planck
Equation: The Movie, L. A. Bergman and B. F. Spencer, Jr., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p519-522.

Parametric Study of Seismic Soil-Tank Interaction. I: Horizontal Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p783-797.

Parametric Study of Seismic Soil-Tank Interaction. II: Vertical Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p798-812.

Performance of Viaduct Girders under Static and Dy-namic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

Pipeline Response to Pile Driving and Adjacent Excava-tion, P. W. Linchan, A. Longinow and C. H. Dowding, GT Feb. 92, p300-316.

Preliminary Investigation of a Lunar 16 Meter Optical Telescope, Walter H. Gerstle, N. N. V. Prasad, Kirk Cessac and Thomas Kratochvil, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2305-2316.

Rate Effects in Uniaxial Dynamic Compression of Con-crete, Tianxi Tang, Lawrence E. Malvern and David A. Jenkins, EM Jan. 92, p108-124.

Response of Model Pile Groups to Strong Shaking, W. D. Liam Finn and W. Blair Gohl, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p27-55.

Response of Space Structures Under Sudden Local Dam-age, Ramesh B. Malla and Baihai Wang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p909-920.

Responses of Bilinear and Impacting Systems Subjected to Regular Waves, Somchai Sumanuskajonkul and Sau-Lon James Hu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p196-

Responses of Nonlinear Oscillators Excited by Non-Gaussian Pulse Processes, Sau-Lon James Hu, (Proba-hilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p144-147.

Rocking Impedance of Embedded Strip Foundations in Layered Soil, A. Bharadwaj and S. Ahmad, GT May 92, p796-813.

Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Hsu and Apostolos Fafitis, ST Sept. 92, p2459-2474. Seismic Passive Resistance of Tied-Back Walls, Richards, Jr. and D. G. Elms, GT July 92, p996-1011

Stiffness Coefficients of Layered Soil Systems, A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624.

Stochastic Critical Excitations, Mukund Srinivasan, Ross Corotis and Bruce Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391.

The Superposition Approach to Pile Group Dynamics, H. El-Marsalawi, A. M. Kaynia and M. Novak, (*Piles Under Dynamic Loads*, Shamsher Prakash, ed., 1992), p114-135.

Time-Delay Effect on Dynamic Response of Actively Controlled Structures, Surjit S. Dhillon and William C. Lennox, AS Oct. 92, p450-464.

TLP Fatigue Due to Second-Order Springing, S. R. Winterstein, T. Marthinsen and T. C. Ude, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p455-458.

Tuned Liquid Damper (TLD) for Suppressing Horizontal Motion of Structures, Yozo Fujino, Limin Sun, Benito M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p2017-

Two Basic Concepts in Offshore Engineering, Guillermo D. Hahn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p188-191.

Vibration of Beams and Trashracks in Parallel and In-clined Flows, Thang D. Nguyen and Eduard Naudasch-er, HY Aug. 91, p1056-1076.

Wavefront Propagation in Random Granular Media, Martin Ostoja-Starzewski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p384-387.

Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771.

Dynamic Stability of Composite-Material Circular Cylindrical Shells with Orthogonal Stiffeners, C. W. Bert, C. D. Kim and V. Birman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p652-655.

Transient Analysis of Flexible Space Structures, D. L. Rice and E. C. Ting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p827-838.

Dynamic Stresses in Granular Assemblies with Micro-structural Defects, A. Shukla, C. Y. Zhu and Y. Xu, EM Jan. 92, p190-201.

Dynamic structural analysis

Analytical Solutions for Thick, Doubly Curved, Laminated Shells, Jiarang Fan and Juyong Zhang, EM July 92, p1338-1356.

An Exact Expres n EXECT EXPRESSION for the Distribution of Linear Com-binations of Uniform Random Variables, Chung-Chih Lin and Marc P. Mignolet, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p555-558. sion for the Distribution of Linear Cor

Parameter Estimations of Structural Dynamic Systems, C.-B. Yun, C.-G. Lee and H.-J. Lee, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p212-215.

Dynamic tests

Elastic Wood Properties from Dynamic Tests and Computer Modeling, Sven Ohisson and Mikael Perstorper, ST Oct. 92, p2677-2690.

Energy Dissipation Characteristics of Rubber Cylinders, Dean L. Sicking, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p139-

Harmonic Excitation of an Unconstrained Saturated Particle Bed, Harri K. Kytömaa and Charles C. Abnet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p640-643.

M. Niedzwecki, ed., 1992, po40-643.
Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.
Updating Dynamic Models and Their Associated Uncertainties for Structural Systems, J. L. Beck and L. S. Katafygiotis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p681-684.

Bed-Load Transport on Transverse Slope. I, Masato Sek-ine and Gary Parker, HY Apr. 92, p513-535. Cylindrical Shell Redesign by Large Admissible Perturba-tions, Basem Alzahabi and Michael M. Bernitsas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p200-203.

Dynamic Analysis of Elastoplastic Softening Discretized Structures, C. Comi, A. Corigliano and G. Maier, EM Dec. 92, p2352-2375.

Dynamic Design of Deepwater Bottom-Founded Towers Denby Grey Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p850-889.

Dynamic Elastic-Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. 92, p2005-2016.

Dynamic Experiments on Two Pile Groups, H. El-Marsafawi, Y. C. Han and M. Novak, GT Apr. 92, p576-592. Dynamic Interface Shear Strength Properties of Geomembranes and Geotextiles, M. K. Yegian and A. M. Lahlaf, GT May 92, p760-779.

M. Lahlat, GY May 92, p76b-779.
Dynamic Response of Flexibly Supported Liquid-Storage Tanks, Anestis S. Veletsos, Yu Tang and H. T. Tang, ST Jan. 92, p264-283.
Dynamics of Buildings with V-Shaped Plan, Sudhir K. Jain and Utpal K. Mandal, EM June 92, p1693-1112.
Effect of Strain Rate on Coll-Formed Steel Stub Columns, M. Kassar, C. L. Pan and W. W. Yu, ST Nov. 92, p3151-3168.
Fifter of Strain Rate on Material Properties of Sheet

Effect of Strain Rate on Material Properties of Sheet Steels, M. Kassar and W. W. Yu, ST Nov. 92, p3136-

Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp. Estimating Extreme Values of Run-Up on Beaches, Scott L. Douglass, WW Mar/Apr. 92, p220-224.

Evaluation of Impact Factors for Horizontally Curved Steel Box Bridges, D. R. Schelling, N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221.

An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, Y. Wang and R. K. N. D. Rajapakse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1008-1011.

Explicit Equations of Motion of Discrete System of Disks in Two Dimensions, Oleg Vinogradov, EM Sept. 92, p1850-1858.

Finite/Macroelement Meshes in Neural Rat Growth, Mona E. McAlarney, Letty Moss-Salentijn, Melvin L. Moss and Manjit Basra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p960-963.

13723, py00-903.

Interaction Effects in the Hybrid Control of Euler-Bernoulli Beams, S. T. Pang, T. -C. Tsao and L. A. Bergman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p820-823.

Interactive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.

Markov Decision Processes in Structural Optimization, Zongwei Tao, J. Hugh Ellis and Ross B. Corotis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-542.

Reliability, Y. K. Lin, ed., 1992), p539-542.

Massively Parallel Computing, C++ and Hydrocode Algorithms, Allen C. Robinson, Arlo L. Ames, H. Eliot Fang, Dino Pavlakos, Courtenay T. Vaughan and Philip Campbell, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p519-526.

Minimal Storage Finite Element Solution of Large-Scale Three-Dimensional Elastodynamic Problems, S. Hassanzadeh, S. Foresti, H. Murakami and V. Sonnad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p762-769.

The Morphology and Dynamics of Natural and Laboratory Grain Flows, Richard R. McDonald and Robert S. Anderson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p748-751.

Nonlinear Eigensolver for Exact Vibration Analysis, H.

and John M. Niedzwecki, ed., 1992), p748-751.

Nonlinear Eigensolver for Exact Vibration Analysis, H. A. Smith, D. C. Sorensen and R. K. Singh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p920-923.

Nonlinear Impulsive Motions of Low-Tension Cables, Michael S. Triantafyllou and Christopher T. Howell, EM Apr. 92, p807-830.

Probabilistic Order of Chaotic Dynamics, A. H.-D. Cheng, C. Y. Yang and K. Hackl, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p420-423.

Respoitth Dynamics, Mohammed M. Ettouney and Haym Benaroya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1379-1388.

Russell J. Miller, ed., 1992, p. 1379-1368.
A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p69-72.
Shear Flow Between Walls in Relative Motion, H. J. Leutheusser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p608-611.
Stochastic Dynamics of Hysteretic Systems, Lucia

Stochastic Dynamics of Hysteretic Systems, Lucia Faravelli and Paolo Venini, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1922), p53-56.

Study of Open-Channel Dynamics as Controlled Process Yuri A. Ermolin, HY Jan. 92, p59-72.

Verification of a Three-Dimensional Modeling in Apa-lachicola Bay, T. S. Wu, (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.

Earnest, G. Brooks
G. Brooks Earnest, ASCE Past President, Dies at Age 90, CE Nov. 92, p76.

Evaluation of Flowable Fly-Ash Backfill. I: Static Load-ing, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463.

Evaluation of Flowable Fly-Ash Backfill. II: Dynamic Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p464-474.

Inverse Analysis of Geotechnical Parameters on Improved Soft Bangkok Clay, Dennes T. Bergado, Apollo S. Enriquez, Casan L. Sampaco, Marolo C. Alfaro and A. S. Balasubramaniam, GT July 92, p1012-1030. Problems Related to Disposal of Fly Ash and its Utilization as a Structural Fill, Buddhima Indraratia, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p274-285.

Earth movements
Altering the Solar System—Landing the Moon, Mars or
Venus on the Earth—Changing the Orbit, the Tilt and
the Size of the Planet Earth, Alexander Abian, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p2231-2240.

(Stehilitz, and Ben.

Natural Landslides, George F. Sowers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p804-833.

Earth pressure
Active Earth Pressure on Walls With Base Projection,
Amjad F. Barghouthi, GT Oct. 90, p1570-1575.
Effects of K<sub>0</sub> and Overconsolidation on Uplift Capacity,
Adel Hanna and Ashraf Ghaly, GT Sept. 92, p14491469.

Estimating Earth Pressures Due to Compaction, J. M. Duncan, G. W. Williams, A. L. Sehn and R. B. Seed, GT Dec. 91, p1833-1847.

GT Dec. 91, p1833-1847.

Fly-Ash Surry Island: II. Construction in Hakucho Ohashi Project, H. Kawasaki, S. Horiuchi, M. Akatsuka and S. Sano, MT May 92, p134-152.

On the Diffusional Stress Transmission, Wlodzimierz Brząkała, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p175-178.

Retaining Wall With Reinforced Cohesionless Backfill, Swami Saran, K. G. Garg and R. K. Bhandar, GT Dec. 92, p1869-1888.

Seismic Passive Resistance of Tied-Back Walls, F. Richards, Jr. and D. G. Elms, GT July 92, p996-1011.

Total Stress Analysis of Cantilever Sheetpiling in Layered Clay, Jay S. DeNatale and German A. Ibarra-Encinas, GT July 92, p1064-1082.

Yielding of Mexico City Clay and Other Natural Clays, J. A. Dlaz-Rodríguez, S. Leroueil and J. D. Alemán, GT July 92, p981-995.

Earth reinforcement
The Behavior of Reinforced Soil Walls Constructed by
Different Techniques, A. McGown, K. H. Loke and R.
T. Murray, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and
llan Juran, ed., 1992), pl 237-1248.
Biotechnical Stabilization of Cut & Fill Slopes, Donald H.
Gray and Robbin B. Sotir, (Stability and Performance
of Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), pl 395-1410.
Bittoschnical Stabilization of Hiebway Cut Slone. Donald

Biotechnical Stabilization of Highway Cut Slope, Donald H. Gray and Robbin B. Sotir, GT Sept. 92, p1395-1409

entrifuge Models of Clay-Lime Reinforced Soil Walls, Erol Güler and Deborah J. Goodings, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1249-Centrifu 1260.

1200.

A Computer Program for the Analysis of Reinforced Soil, F. Reyna, D. Humphrey, B. Christopher and J. L. Chameau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1225-1236.

Construction Induced Vibration in Urban Environments, Barry M. New, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p212-239.

Design and Performance of Two Port Siles on Improved.

Design and Performance of Two Port Silos on Improved Ground, M. U. Ergun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p842-854.

Dynamic Response Analysis of Reinforced-Soil Retaining Wall, Muthucumarasamy Yogendrakumar, Richard J. Bathurst and W. D. Liam Finn, GT Aug. 92, p1158-

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

Finite Element Analysis of a Geogrid Reinforced Soil Wall, Richard J. Bathurst, Rajagopal Karpurapu and Peter M. Jarrett, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1213-1224.

Finite Element Analysis of Slopes with Layer Reinforce-ment, Robert M. Ebeling, John F. Peters and Reed L. Mosher, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1427-1443.

Gabions and Geogrids, Alfred H. Brand, CE Sept. 92, p65-67.

Interface Friction of Polypropylene Straps, Meijiu Wei and Abdelmalek Bouazza, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1175-1187.

Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Far-rag and Victor Elias, GT Jan. 90, p54-72.

aboratory Model Study on Geosynthetic Reinforced Soil Retaining Walls, I. Juran and B. Christopher, GT July 89, p905-926.

Reinforced Granular Soil for Track Support, G. P. Raymond, M. S. A. Abdel-Baki, R. G. Karpurapu and R. J. Bathurst, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1104-1115.

Shear Zone Formation and Slope Stability Analysis, Scott E. Shewbridge and Nicholas Sitar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370.

Scen, ed. and Ross W. Boulanger, ed., 1972), p358-370.
Slope Stabilization Using In-Situ Earth Reinforcements,
Seth L. Pearlman, Bradley D. Campbell and James L.
Withiam, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p1333-1348.

Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.

Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.

Technique for Using Fine-Grained Soil in Reinforced Earth, A. Sridharan, B. R. Srinivasa Murthy, Bin-dumadhava and K. Revanasiddappa, GT Aug. 91, p1174-1190.

Two New Specialty Geotechnical Processes for Slope Sta-bilization, Donald A. Bruce, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1505-1519.

Use of Rubber Tires in Highway Construction, Imtiaz Ahmed and C. W. Lovell, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p166-181.

Stability Analysis of an Earth Slope, T. William Lambe and Francisco Silva-Tulla, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p27-69.

and Ross W. Boulanger, ed., 1992), p27-69.
Stability of the Olga C Test Embankment, J. G. Lavailée, G. St-Arnaud, R. Gervais and Y. Hammamij, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1006-1021.

Technique for Using Fine-Grained Soil in Reinforced Earth, A. Sridharan, B. R. Srinivasa Murthy, Bin-dumadhava and K. Revanasiddappa, GT Aug. 91, p1174-1190.

### Earthfill

Design of the Charter Oak Bridge Embankments, Alec D. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p721-736.

An Embankment on Soft Clay With an Adjacent Cut, Walter Steiner, Richard Metzger and W. Allen Marr, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720.

Stress Ratio Effects on Collapse of Compacted Clayey Sand, Evert C. Lawton, Richard J. Fragaszy and James H. Hardcastle, GT May 91, p714-730.

Earthmoving
Application of Neural Networks in Earthmoving Equ Application of Neural Networks in Earthmoving Equip-ment Production Estimating, Saced Karshenas and Xin Feng, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p841-847. Automatic Generation of Simulation Codes in Construc-tion, Ali Touran, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1050-1057.

1057.

1057. Earthflow Evaluation and Control: A Case History, Michael R. Thomas and Alan L. Kropp, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864. Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

Earthquake damage
Analytical Studies on the Seismic Response of Lead Rubber Base Isolated Bridges, Emmanuel Maragakis, Mebdi Saiidi and Eui-Seng Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p67-70.

Austornoof the Lona Prints Earthquake Records of Two

Anatomy of the Loma Prieta Earthquake Records of Two Steel Buildings Using MIMO System Identification, Y. Li and S. T. Mau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p689-

An Assessment of Environmental Costs Associated with Crude Oil Pipeline Damage Caused by Earthquakes, Ronald T. Eguchi, Susan D. Pelmulder and Hope A. Seligson, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p153-167.

p133-167.
Computed Versus Observed Seismic Response and Damage of Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1804-1821.
Development of a Limit-State Seismic Code for Bridges, Ian G. Buckle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p164-167.

p104-107.

Earthquake Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Gerald M. Serventi and Larry L. Scheibel, (Ports '92, David Torseth, ed., 1992), p429-442.

Earthquake-Induced Permanent Deformations: Probabilistic Approach, M. K. Yegian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50.

Earthquaker's A. New Look at Czecked Masonry, Rangellong and Control of the Control

G. Ghahraman, GT Jan. 91, p35-50. Earthquakes: A New Look at Cracked Masonry, Ran-dolph Langenbach, CE Nov. 92, p56-58. Evaluation of Seismic Vulnerability of Highway Bridges in the Eastern United States, J. B. Mander, F. D. Panthaki and M. T. Chaudhary, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86.

Ballantyne, ed., 1992), p72-86.
 A GIS-Based Regional Risk Approach for Bridges Subjected to Earthquakes, Seong H. Kim, Michael P. Gaus, George Lee and K. C. Chang. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p460-467.
 Impact on Water Supply of a Seismically Damaged Water Delivery System, M. Shinozuka, H. Hwang and M. Murata, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p43-57.
 Keeping Computers from Crashing, CE Feb. 92, p12.

p43-57.

Keeping Computers from Crashing, CE Feb. 92, p12.

Knowledge Acquisition for Postearthquake Usability Decisions, Zahra-El-Hayat Tazir, Tommaso Pagnoni and Carlo Gavarini, (Knowledge Acquisition in Crid Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p147-168.

La Villita Dam Response During Five Earthquakes Including Permanent Deformation, Ahmed-Waeil M. Elgamal, Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, p1443-1462.

Migration of Spilled Oil from Ruptured Underground Crude Oil Pipelines in the Memphis Area, Otto J. Helweg, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p140-152.

mulan Eastern Co., Boston Repair of Earthquake Damaged Harbor Infrastructure, Lyndell Z. Hales and Ivan L. Sheall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p370-386.

A Probabilistic Regional Damage Estimation Model for Earthquake Occurrences, Dimitris Renzits, Anne Kiremidjian and Craig Howard, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24.

Lin, ed., 1992), p21-24.
 Seismic Hazard Analysis for Crude Oil Pipelines in the New Madrid Seismic Zone, Michael J. O'Rourke, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p125-139.
 Transportation Lifeline Losses in Large Eastern Earth-quakes, C. Rojahn, C. Scawthorn and M. Khater, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101.

Archanake engineering
Anchors in the Desert, Donald A. Bruce, William Fiedler
and Ronald Triplett, CE Dec. 91, p40-43.
Dynamic Interface Shear Strength Properties of
Geomembranes and Geotextiles, M. K. Yegian and A.
M. Lahlaf, GT May 92, p760-779.
Dynamics of Buildings with V-Shaped Plan, Sudhir K.
Jain and Utpal K. Mandal, EM June 92, p1093-1112.
Earthouake Considerations in Earth Dam Design, James

Jain and Utpai K. Mandal, EM June 92, p1093-1112. Earthquake Considerations in Earth Dam Design, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p30-54. Effect of Contraction Joints on Earthquake Response of Arch Dam, Gregory L. Fenves, Soheil Mojiahedi and Richard B. Reimer, ST Apr. 92, p1039-1055. Frequency Domain Analysis of Undamped Systems, Eduardo Kausel and Jose M. Roësset, EM Apr. 92, e721-734.

p721-734.

Knowledge Acquisition for Postearthquake Usability De-cisions, Zahra-El-Hayat Tazir, Tommaso Pagnoni and Carlo Gavarini, (Knowledge Acquisition in Civil Engi-neering, Tomasz Arciszewski, ed. and Lewis A. Ross-man, ed., 1992), p147-168.

Lessons Not Learned from 1989 Loma Prieta Earthuake, Ghassan Tarakji, El Apr. 92, p132-138.

Grander, University of the Control and East-ern U.S., Technical Council on Lifeline Earthquake En-gineering Monograph No. 5, Donald B. Ballantyne, ed., 1992, 0-87262-902-3, 200pp.

Modeling of Lateral Spreads in Silty Sands by Sliding Soil Blocks, Ricardo Dobry and Mohammad H. Baziar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p625-652.

Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Hsu and Apostolos Fafitis, ST Sept. 92, p2459-2474.

Seismic Design of Viscoelastic Dampers for Structural Applications, Ri-Hui Zhang and T. T. Soong, ST May 92, p1375-1392.

July 13/75-1392.
 Esismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, Klaus H. Jacob, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p58-71.
 Seismic Performance of Fixed-Base and Base-Isolated Steel Frames, A. N. Lin and H. W. Shenton, III., EM May 92, p921-941.

Seismically Safe, Spectator-Friendly, Charles H. Thornton, Thomas Z. Scarangello and Chris Christoforou, CE Feb. 92, p52-54.

Earthquake excitatio

Earthquake excitations

Effect of Soil Plasticity on Cyclic Response, Mladen Vucetic and Ricardo Dobry, GT Jan. 91, p89-107.

La Villita Dam Response During Five Earthquakes Including Permanent Deformation, Ahmed-Waeil M. Elgamal, Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, p1443-1462.

Nonstationary Response of Structures with Closely Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.

EM July 92, p1387-1405.

Parametric Study of Seismic Soil-Tank Interaction. I: Horizontal Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p783-797.

Parametric Study of Seismic Soil-Tank Interaction. II: Vertical Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p798-812.

Random Vibration under Propagating Excitation: Closed-Form Solutions, Ronald S. Harichandran, EM Mar. 92, p375-586.

Stochastic Critical Excitations, Mukund Srinivasan, Ross Corotis and Bruce Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391.

Structural Control Under Stochastic Seismic Loads, J. N. Yang, Z. Li and S. Vongchavalitkul, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p828-831.
Vibration Control of Highway Bridge Under Earthquakes, Zhikun Hou and Gongkang Fu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p176-179.
Wavelet Transform Analysis of Several Transient or Nonstationary Phenomena in Engineering Mechanics, James T. Kirby, Michael J. Chajes and Jeffrey A. Melby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p204-207.

Earthquake loads
Earthquake Support Grouting in Sands, Edward D. Graf,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p879-888.

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski Brown, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992),

ciencies and Faitures, 110mas D. Minis, people popting popting

K. Lin, ed., 1992), p168-171.
Structural Control Under Stochastic Seismic Loads, J. N. Yang, Z. Li and S. Vongchavalitkul, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p828-831.

ed., 1992), p828-831.

Earthquake resistant structures

Beam Strength Enhancement at Design Ductility Factor
Demands, Gaetano Russo, ST Dec. 90, p3402-3416.

Confinement Steel Requirements for Connections in
Ductile Frames, M. R. Ehsani and J. K. Wight, ST
Mar. 90, p751-767.

Control of Hysteretic System Using Velocity and Acceleration Feedbacks, J. N. Yang, Z. Li and S. C. Liu, EM
Nov. 92, p2227-2245.

Cyclic Behavior of End-Plate Moment Connections,
Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90,
p2917-2930.

Earthquake Considerations in Earth Dam Design, James

Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2917-2930.

Earthquake Considerations in Earth Dam Design, James L. Sherard, (Embankment Dams—James L. Sherard (Contributions, Sukhanander Singh, ed., 1992), p30-54.

Earthquake Countermeasures for Lifelines in the Central and Eastern United States, T. D. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p168-191.

Experimental Performance of Long Links in Focentrically Braced Frames, M. D. Engelhardt and E. P. Popov, ST Nov. 92, p3067-3088.

Full Scale Application of Active Bracing Systems, M. A. Riley, A. M. Reinhorm and T. T. Soong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p816-819.

Hysteretic Response of Reinforced-Concrete Infilled Frames, Sinan Altin, Ugur Ersoy and Tugnil Tankut, ST Aug, 92, p2133-2150.

Seattle Plays it Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug, 92, p38-40.

Seismic Design of Viscoelastic Dampers for Structural Applications, Ri-Hui Zhang and T. T. Soong, ST May 92, p1375-1392.

Seismic Mitigation of the Memphis Water System, Keven M. Piece Response of the Memphis Water System, Keven M. Prese Central Response of the Memphis Water System, Keven M. Prese Central Response of the Memphis Water System, Keven M. Prese Central Response of the Memphis Water System, Keven M. Prese Central Response of the Memphis Water System, Keven M. Prese Central Response of the Memphis Water System, Keven M. Prese Central Response of the Memphis Water System, Keven Memp

Seismic Mitigation of the Memphis Water System, Kevin M. Poe. (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p16-28.

ismic Panel Zone Design Effect on Elastic Story Drift in Steel Frames, Keh-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

Seismic Performance of Fixed-Base and Base-Isolated Steel Frames, A. N. Lin and H. W. Shenton, III., EM May 92, p921-941.

Seismically Safe, Spectator-Friendly, Charles H. Thornton, Thomas Z. Scarangello and Chris Christoforou, CE Feb. 92, p52-54.

CE Feb. 92, pp.2-54.
Stability of Beams in Eccentrically Braced Frames, M. D. Engelhardt, K. C. Tsai and E. P. Popov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1043-1046.
Stable Controllers for Instantaneous Optimal Control, J. N. Yang, Z. Li and S. C. Liu, EM Aug. 92, p1612-1630.

Structural Reliability of Seismic Isolation System, Kazuta Hirata, Kenji Shirahama and Takahiro Somaki, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p57-60.

Utilization of Economical Slopes for Jordanelle Dam, John A. Wilson, William O. Engemoen, Francis G. McLean and Perry J. Hensley, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653-668.

Earthquake simulation models

An Assessment of Environmental Costs Associated with Crude Oil Pipeline Damage Caused by Earthquakes, Ronald T. Eguchi, Susan D. Pelmulder and Hope A. Seligson, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p153-167.

Seismic Hazard Along a Central U.S. Oil Pipeline, Howard H. M. Hwang, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), pl 10-124.

Earthquakes
Actively Controlled P-F Based Sliding Structures, Sohail
M. Qureshi, Kiyoshi Uno and Hajime Tsutsumi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p324-327.
Bahawire of Earth Dam Using Strong-Motion

Niedzwecki, ed., 1992], p34-327.
Analysis of Behavior of Earth Dam Using Strong-Motion Earthquake Records, Mourad Zeghal and Ahmed M. Abdel-Ghaffar, GT Feb. 92, p266-277.
Anatomy of the Loma Prieta Earthquake Records of Two Steel Buildings Using MIMO System Identification, Y. Li and S. T. Mau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p689-602.

692.

Aseismic Hybrid Control of Nonlinear and Hysteretic Structures I, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1423-1440.

Aseismic Hybrid Control of Nonlinear and Hysteretic Structures II, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1441-1456.

Design Considerations for Using Adhesives in Shear Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

Development of Design Spectra for Actively Controlled Wall-Frame Buildings, Y. P. Wang, A. M. Reinhorn and T. T. Soong, EM June 92, p1201-1220.

Dynamic Effect of Sediment on Dam Hydrodynamics, Bang-Fuh Chen, Kuo-Chyang Chang and Tin-Kan Hung, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p345-348.

Dynamic Soil-Pile-Structure Interaction—The State-of-Practice, Asadour H. Hadjian, Richard B. Fallgren and Mark R. Tufenkjian, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p1-26.

Earthquake Considerations in Earth Dam Design, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p30-54.

Earthquake Countermeasures for Lifelines in the Central and Eastern United States, T. D. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p36-191.

Earthquake Ground Motion Modeling with Stochastic Line Source, Ruichong Zhang and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p265-259.

Earthquake Hazard Investigative Procedures for Central Linited States Waterwoods. Inner B. Blacklock (Life)

Earthquake Hazard Investigative Procedures for Central United States Waterworks, James R. Blacklock, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p1-15.

U.S., Donald B. Ballantyne, ed., 1992), p1-15.
 Effectiveness of Seismic Strengthening Techniques for Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1884-1902.
 Effects of Liquefaction on Lateral Pile Responses, T. Kagawa, (Piles Under Dynamic Loads, Damsher Prakash, ed., 1992), p207-223.
 Evaluation of Soil Properties for Seismic Stability Analyses of Slopes, Geoffrey R. Martin, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p116-142.
 Experimental Study of Sliding Isolated Structures with Uplift Restraint, Satish Nagarajaish, Andrei M. Reinhorn and Michalakis C. Constantinou, ST June 92, p1666-1682.
 Finite Element Model for Seismic RC Coupled Walls

Finite Element Model for Seismic RC Coupled Walls Having Stender Coupling Beams, Omar Chaallal, ST Oct. 92, p2936-2943.

Geographic Information Systems in Earthquake Hazard Analyses, J. David Frost, Jean-Lou A. Chameau and Ronaldo Luna, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p452-459. Influence of ADAS Element Parameters on Building Seis-mic Response, Chuan Xia and Robert D. Hanson, ST July 92, p1903-1918. Instability of Buildings Subjected to Earthquakes, Dispo-

July 92, p1903-1918.
Instability of Buildings Subjected to Earthquakes, Dionisio Bernal, ST Aug. 92, p2239-2260.
Interactive Base-Isolation Foundation System: I. Finite Element Formulation, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2048-2058.
Interactive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.
Load Shortening in Plastic Buckling of Cylinders, Marwan El-Bkaily and Ralf Peek, EM Sept. 92, p1892-1906.

Migration of Spilled Oil from Ruptured Underground Crude Oil Pipelines in the Memphis Area, Otto J. Helweg, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992).

trail and Edstern U.S., Donaid B. Ballantyne, ed., 1992), p140-152.

Modeling Fault Rupture Hazard for the Proposed Repository at Yucca Mountain, Nevada, K. J. Coppersmith and R. R. Youngs, (High Level Radioactive Waste Management Program Committee, 1992), p1142-1150.

Modeling of Lateral Spreads in Silty Sands by Sliding Soil Blocks, Ricardo Dobry and Mohammad H. Baziar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p625-652.

Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, Loai El-Gazairly, Barry Goodno and James Craig. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p836-904.

On the Influence of Seismically Induced Residual Forces on Bridge Abutment Design, Raj Siddharthan and Mahmoud El-Gamal, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p51-54.

On the Response of Earth Dams Subjected to Earthqu

On the Response of Earth Dams Subjected to Earthquake Fault Rupture, Jonathan D. Bray, Raymond B. Seed and H. Bolton Seed, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p608-624.
Out-of-Plane Seismic Response of Reinforced Masonry Walls, Martin R. Button and Ronald L. Mayes, ST Sept. 92, p2495-2513.
Perspectives on Seismic Design Basis Deterministic and Probabilistic Approaches, Robin K. McGuire, Robert T. Sewell, Gabriel R. Toro and J. Carl Stepp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p137-1141. 1992), p1137-1141.

1992), p1131-1141.
Post-Earthquake Slope Stability of Two Dams with Liquefied Gravel Foundations, D. W. Sykora, J. P. Koester, R. E. Wahl and M. E. Hynes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005.

1003. Potentially Active Faults in Dam Foundations (Paper introduced by Clarence R. Allen), J. L. Sherard, L. S. Cluff and C. R. Allen, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p204-266.

p204-266.
Probabilistic Characteristics of a Sliding Structure Via New Stochastic Linearization Methods, Ruichong Zhang, Isaac Elishakoff and Masanobu Shinozuka, Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p196-199.
Propagation of Long Waves Onto Shelf, Derek G. Goring and Fredric Raichlen, WW Jan./Feb. 92, p43-61.
Quake Clearinghouse Selected, CE June 92, p11.
Recorded Seismic Response of Pacific Park Plaza. II: System Identification, E. Şafak and M. Çelebi, ST June 92, p1566-1589.

p1566-1589

P1360-1389.

Response of Model Pile Groups to Strong Shaking, W. D. Liam Finn and W. Blair Gohl, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p27-55.

Roof-Snow Load for Seismic-Design Calculations, Michael J. O'Rourke and Robert S. Speck, Jr., ST Sept. 92, p2338-2350.

Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p38-40.

Seismic Assessment of Tailings Dams, Thomas G. Har-per, Harvey N. McLeod and Michael P. Davies, CE Dec. 92, p64-66.

Seismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, Klaus H. Jacob, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p58-71.

Seismic Mitigation of the Memphis Water System, Kevin M. Poe, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p16-28.

Seismic Response of Landfill Slopes, D. G. Anderson, B. Hushmand and G. R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p973-989. Seismic Response of Pacific Park Plaza. I: Data and Preliminary Analysis, M. Çelebi and E. Şafak, ST June 92, p1547-1565.

Seismic Response of R/C Frames with Irregular Profiles, Sharon L. Wood, ST Feb. 92, p545-566.

Seismic Response Variability of Soil Sites, C. H. Yeh and M. S. Rahman, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p392-395.

Seismic Stability and Permanent Deformation Analyse the Last Twenty Five Years, W. F. Marcuson, Ill., M. E. Hynes and A. G. Franklin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p552-592.

ismic-Energy Dissipation in MDOF Structures, P. Léger and Serge Dussault, ST May 92, p1251-1269.

Selection of Ground Motions for the Seismic Evaluation of Embankments, Robert K. Green, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p593-607.

Site-Dependence of Spatial Coherency, Norman Abrahamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p260-263.

Soil/Structure Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p396-399.

Stable Controllers for Instantaneous Optimal Control, J. N. Yang, Z. Li and S. C. Liu, EM Aug. 92, p1612-1630.

Steady-State Strength Analysis of Lower San Fernando Dam Silde, Gonzalo Castro, Raymond B. Seed, Thom-as O. Keller and H. Bolton Seed, GT Mar. 92, p406-427.

Stochastic Modelling of Strong Ground Motions for the Istanbul, Turkey Area from Seismic Data for the Surrounding Region, Kirsten L. Findell and Ahmet S. Cakmak, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-271.

Structural Control Design in the Presence of Time De-lays, P. M. Sain, B. F. Spencer, Jr., M. K. Sain and J. Suhardjo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815.

Structural Seismic Damper, Manuel Aguirre and A. Roberto Sánchez, ST May 92, p1158-1171.

Three-Dimensional Seismic Analysis of La Villita Dam, A.-W. Elgamal, GT Dec. 92, p1937-1958.

Transportation Lifeline Losses in Large Eastern Earth-quakes, C. Rojahn, C. Scawthorn and M. Khater, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101.

Undrained Shear Strength of Liquefied Sands for Stability Analysis, Timothy D. Stark and Gholamreza Mesri, GT Nov. 92, p1727-1747.

Wave Attenuation in Viscoelastic Continuum with Fad-ing Memory, Song-tao Xue, Jun Tobita, Tetsuya Han-zawa and Masanori Izumi, EM Aug. 92, p1597-1611.

Cut and Fill Calculations by Modified Average-End-Area Method, James W. Epps and Marion W. Corey, TE Sept./Oct. 90, p683-689.

Estimating Earthwork Volumes of Curved Roadways: Mathematical Model, Said M. Easa, TE Nov./Dec. 92,

Pelton Landslide: An Unusual Double-Wedge Failure, Derek H. Cornforth and D. Andrew Vessely, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p310-324.

Eccentric bracin

Eccentric bracing
Experimental Performance of Long Links in Eccentrically
Braced Frames, M. D. Engelhardt and E. P. Popov, ST
Nov. 92, p3067-3088.
Stability of Beams in Eccentrically Braced Frames, M. D.
Engelhardt, K. C. Tsai and E. P. Popov, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p1043-1046.

Eccentric loading
Eccentric loading
Eccentric loading
Eccentrically Loaded Plates on Reinforced Subgrades,
Vito A. Guido and John J. Nocera, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed.,
Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1116-

Eccentric loads
Reinforced Granular Soil for Track Support, G. P. Raymond, M. S. A. Abdel-Baki, R. G. Karpurapu and R. J. Bathurst, (Grossing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 104-1115.

Juran, ed., 1992), pl 104-1115.

Eccentricity
Bin-Wall Failure Caused by Eccentric Discharge of FreeFlowing Grain, R. A. Bucklin, S. A. Thompson and I. J.
Ross, ST Nov. 90, p3175-3190.
Large-Displacement Effects on Dynamic Response of Eccentric Buildings, Lidia La Mendola and Maurizio Papia, Elm May 91, p954-973.

Normalizing Inelastic Seismic Response of Structures
Having Eccentricities in Plan, Michel Bruneau and
Stephen A. Mahin, ST Dec. 90, p3358-3379.

Statistical Analysis of Slender Composite Beam-Column
Strength, S. A. Mirza and B. W. Skrabek, ST May 92,
p1312-1332.

pt312-1332.

Ecology
Altering the Solar System—Landing the Moon, Mars or Venus on the Earth—Changing the Orbit, the Tilt and the Size of the Planet Earth, Alexander Abian, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2231-2240.

Bringing Ecology to the Classroom, CE Jan. 92, p11.

Ecological Sustainable Development—A Place in the Sun for Nuclear Energy? Carole Palmer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Committee, 1992), p1470-1477.

Green Architecture: Designing an Ecologically Sound

Green Architecture: Designing an Ecologically Sound Dwelling, Reinhard Kanuka-Fuchs, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

in the Twenty-First Century, Mehmet Inan, ed., 1992), pl-10.

LIAC: A Closed Ecosystem Research Facility, Derek E. Shipley, Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1765-1776.

Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, J. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiy, ed., 1992), p236-259.

One-Dimensional River Flow Simulation with Particular Consideration of Ecology and Environment, E. Ritter-Consideration of Ecology and Environment, E. Ritter-

One-Dimensional River Flow Simulation with Particular Consideration of Ecology and Environment, E. Ritterbach, M. Schröder and G. Rouvé, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownit, ed., 1992), pl.142-1147.
Pine Creek Tidal Hydraulic Study, James G. MacBroom and Edward Hart, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl.154-1158.

p1134-1136.

Economic analysis
Alliance Promotes Infrastructure Investment (ltr), Ellis S.
Vieser, CE Sept. 92, p38.
Automation of Concrete Slab-on-Grade Construction,
Osama Moselhi, Paul Fazio and Stanley Hason, CO
Dec. 92, p731-748.
Benefit-Cost Ratios: Failures and Alternatives, Jay R.
Lund, WR Jan./Feb. 92, p94-100.

Cost Models for Preliminary Economic Evaluation of Sprinkler Irrigation Systems, D. Kumar, C. D. Heatwole, B. B. Ross and D. B. Taylor, IR Sept./Oct. 92, p757-775.

Economic Analysis of Including an MRS Facility in the Waste Management System: A Revisit, J. W. Williams, C. Conner, A. J. Leiter and E. Ching, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1903-1908.

Economics of Ocean Thermal Energy Conversion (OTEC), Luis A. Vega, (Ocean Energy Recovery: the State of the Art, Richard J. Scymour, ed., 1992), p152-

181.

Efficient Sizing of Storm Water Treatment Ponds, Thomas R. Sear and Brenda van Ravenswaay, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

Empirical Simulation of Future Hurricane Storm Histories as a Tool in Engineering and Economic Analysis, Leon Borgman, Martin Miller, Lee Butler and Robin Reinhard, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p42-65.

Method for Preevaluation and Selection of Road Projects in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-178.

170.
Optimal Design of Parabolic Canals, G. V. Loganathan, IR Sept./Oct. 91, p716-735.
Quantification of Agency and User Values of Pavement Performance, T. F. Fwa and K. C. Sinha, TE Jan./Feb. 92, p84-98.

92, po4-93.

Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352.

Scheduling Maintenance Dredging on Single Reach with Uncertainty, Jay R. Lund, WW Mar./Apr. 90, p211-211

231.

Screening Old Offshore Platforms: Previous Approaches and Further Thoughts, Peter W. Marshall, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed.,

neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p518-530.
Session Report—Natural and Man-Made Hazards and Risk of Extreme Events, Jim Lambert, (Risk-Based De-cision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-thiv, ed., 1992), p358-359.

Economic conditions
A Buyer's Market, CE Mar. 92, p8.

December Helps, But Contracts Still Down, CE Apr. 92. Design Firms Feel Economic Pinch, But Effect is Un-even, NE Jan. 92, p2.

Economy Puts Brakes on High-Speed Rail Projects, CE Dec. 92, p16. Group Explores Eastern Bloc Market, CE June 92, p11.

Happy Days Are Here Again? Says Report, CE Oct. 92, p8.

Improving International Competitiveness, Robert C. West, El Apr. 92, p107-112. Recession Brings Maturity to Environmental Market, CE Dec. 92, p27.

Standing Room Only at Portland Bid Meeting, CE Dec.

92, p14. Surplus Promotes CE Dec. 92, p6. as Promotes Price Competition, Tore O. Arnesen,

Economic development
New Seoul Metropolitan Airport, William H. Small, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p155-162.

The Proposed Waste Management Plan for Dairy Farm Wastes Polluting the Tangipahoa River and Lake Pontchartrain, Gianna M. Jones, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p656-661.

## mic factors

California's Tradable Emissions Policy and Greenhouse Gas Control, John P. Dwyer, EY Aug. 92, p59-76. Closed Cycle Ocean Thermal Energy Conversion, F. A. Johnson, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p70-108.

Diesel as Case of Consumer Choice in Alternative Trans-port Fuels, Joel R. Couse, EY Aug. 92, p95-108.

Economic Factors in Roller Compacted Concrete Dam Construction, John W. Parker, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p227-241. Economics of Tidal Power, T. L. Shaw, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p34-41.

Economics of Wave Power, George Hagerman, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p213-257.

Energy Reconery: the State of the Art, Richard J. Seymour, ed., 1992), p213-257.

From Studge to Brokered Biosolids, Teresa Austin, CE Aug, 92, p32-35.

Housing—Economic Standard, D. Eliakim, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p66-74.

Lessons Not Learned from 1989 Loma Prieta Earth-quake, Ghassan Tarakji, El Apr. 92, p132-138.

New Technology Applicable to Tidal Power, G. C. Baker, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p42-69.

Pivotal 1992 Elections, Casey Dinges, CE Oct. 92, p112.

The State of the Art in Tidal Power Recovery, J. Gavin Warnock and Robert H. Clark, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p4-33.

U.S. Studge Digesters: From Pancakes to Eggs, Teresa Austin, CE Oct. 92, p36-39.

Water Management: Challenge and Opportunity, Warren Viessman, Jr., WR Mar/Apr. 90, p155-169.

What Should the ASCE Model Water Code Committee Do? Leonard Shabman, (Water Resource: Planning and Management: Saving a Threatened Resource: Planning and Management: Saving a Threatened Resource: In Search of Solutions, Mohammad Karamouz, ed., 1992), p237-241.

Economic feasibility

Economic Feasibility

An Economic Evaluation of the Thunder Bay Air Terminal Development Strategies, John P. Braaksma, Andrew Schmidt and Peter Friedrichs, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), pl 24-147.

Economic forecasting

A/E Compensation Levels Stay Flat as Vestiges of Recession Linger On, NE July 92, p15.

Construction Jobs Lurk Underground, CE Aug. 92, p8.

Mixed Bag for CEs in Bush 1993 Budget, Casey Dinges, CE Apr. 92, p108.

Outlook for Design Security 1993 Budget, Casey Dinges, Outlook for Design Security 1993.

Outlook for Design Services Flat over Short Term, NE Mar. 92, p2.

Economic growth

Infrastructure Investment Builds Economic Muscle, Neil S. Grigg, CE June 92, p6.

Postconvention Trip Slated for Bermuda in September, CE May 92, p78.

Economic Impact
California's Recession Remedy, CE Sept. 92, pl 1.
City and County of Denver Approach to Management
Requirements, Ginger S. Evans, (International Air
Transportation: A New International Airport, Robert E.
Boyer, ed., 1992), pl 64-169.

Boyer, ed., 1992), p164-169.
Conflict of Interest in Deep-Draft Anchorage Usage—
Application of QT, Jan A. Berg-Andreassen and Adam K. Prokopowicz, WW Jan./Feb. 92, p75-86.
Earthquakes: A New Look at Cracked Masonry, Randolph Langenbach, CE Nov. 92, p56-58.
Economic Impact of Nuclear Facilities, Eric Knox and Scott Burnison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee. 1992) p049-093

agement, High Level Radioactive Waste Management Program Committee, 1992), p949-953. A Forecasting Model of Gaming Revenues in Clark County, Nevada, B. Edwards, A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p943-948.

Internal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2360-2366.

Optimizing Economic Returns in Drainage Design, Larry D. Geohring, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p26-31.

Rehabilitation of Infrastructure in Infill Sites, Stephen Sussna, El Oct. 92, p381-387.

Social-Economic Impacts of the October 1983 Flood in Pima County, Arizona, David A. Smutzer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1072-1075.

Bhowmik, ed., 1992), p101-21073.
Transportation Lifeline Losses in Large Eastern Earthquakes, C. Rojahn, C. Scawthorn and M. Khater, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101.
Trouble on the Waterways? Paul Tarricone, CE Feb. 91,

Economic justification
California's Tradable Emissions Policy and Greenhouse
Gas Control, John P. Dwyer, EY Aug. 92, p59-76.
Small Utility GIS, Didier Goubert and Robert Newton,
CE Nov. 92, p69-71.

A Competitive Framework for Evaluating the Economic Benefits of Port Improvements, Ira Hirschman and Ogden Beeman, (Ports '92, David Torseth, ed., 1992),

Economics
Advanced Structures in Very Deep Water, Richard J. Seymour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952.
Aeration Using the Howell-Bunger Valve, D. D. Kraus and E. R. Husson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p299-304.

Affordable Financing—The Crux of Affordable Housing, Rodolfo J. Aguilar, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p75-81. Benefit-Cost Ratios: Failures and Alternatives, Jay R. Lund, WR Jan/Feb. 92, p94-100.

Conflict of Interest in Deep-Draft Anchorage Usage— Application of QT, Jan A. Berg-Andreassen and Adam K. Prokopowicz, WW Jan./Feb. 92, p75-86.

The Desalination Situation, John Prendergast, CE Aug. 92, p42-44.

92, p42-44.
Design Criteria and Specifications for Pipeline Rehabilitation Projects, Lawrence I. Erdos, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p742-747.
Economical and Statistical Based On-Farm Irrigation Scheduling, L. Niel Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p146-151.
Economics of Ocean Thermal Energy Conversion (OTEC), Luis A. Vega, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p152-181.

Economics of Wave Power, George Hagerman, (Ocean Energy Recovery: the State of the Art, Richard J. Sey-mour, ed., 1992), p213-257.

mour, ed., 1992), p213-257.

Engineering-Econometric Model of Energy Demand, Fabrizio Carlevaro, Jean-Luc Bertholet, Jean-Paul Chaze and Patrick Taffé, EY Aug. 92, p109-121.

Extraterrestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillett and David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Müller, ed., 1992), p1048-1057.

Russell's Miller, ed., 1992, p1048-1091.
Feasibility Study of Petroleum Development in the Ross Sea, Antarctica, Dieter Beike, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p341-355.
Improving International Competitiveness, Robert C.
West, El Apr. 92, p107-112.

Internationalization of Engineering Professions, N. D. Birrell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p983-1005.

Loss Accounting Principles With Emphasis on Bridge Failure, Hal Cochrane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Lunar Surface Mine Feasibility Study, Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1092-1103.

Model for Prescribing Ground-Water Use Permits, James W. Maie and Frederick A. Mueller, WR Sept./Oct. 92, p543-561.

Offshore Structures—Past, Present, and Future, Lyle Finn, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p218-242.
Optimizing Economic Returns in Drainage Design, Larry D. Geohring, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p26-31.
Planning and Design Guidelines for Small Craft Harbors—Economics and Finance, ASCE Ports and Harbors—Economis Solar Cells for Large-Scale Space Applications, John Trefny, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p798-803.
Quantitative Risk Assessment and Technology Transfer. Software Developments, Charles Yoe, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakiiv, ed., 1992), p92-107.
Recycling Wastewater by Drip Irrigation, Win Bui, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p437-441.

441.
Towards a Spacefaring Civilization, Gordon R. Woodcock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russeil J. Miller, ed., 1992), p2008-2022.
A Vision for Planetary Exploration, John F. Connolly, Robert K. Callaway, Mark K. Diogu, Gene R. Grush, E. Mason Lancaster, William C. Morgan, David A. Petri, Barney B. Roberts, Lester A. Pieniazek, Thomas M. Polette and Larry D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-2195. p2188-2195.

P2106-2193.

Ecosystem
LIAC: A Closed Ecosystem Research Facility, Derek E. Shipley, Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1765-1776.

Perceptions, Sensitivity, and Solutions, Water Quality 2000, John B. Pearce, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-43.

Probabilistic Environmental Risk of Hazardous Materials, Timothy L. Jacobs and P. Aarne Vesilind, EE Nov./Dec. 92, p878-889.

Proposed Development of South Central Florida Hydro-logic Ecosystem Model, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p707-711.

Water, Endangered Ecosystem: Assessment of Chemical Pollution, Werner Stumm, EE July/Aug. 92, p466-476.

Civil Engineering Education in Ecuador, Oswald Ren-don-Herrero and Joseph H. Sherrard, El Oct. 92,

Ecuador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, Ricardo Javier Moreno, SU Nov. 92, p118-129.

Rob. 78, pli-129. Eddy viscosity

A Modified Adjoint Method for Inverse Eddy Viscosity
Estimation for Use in Coastal Circulation Models, John E. Richardson and Vijay G. Panchang, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p733-745. Vertical Distribution of Suspended Sediment in Uniform Open-Channel Flow, Motohiko Umeyama, HY June 92, p33-6941

Open-Channe 92, p936-941.

Edge effect Use of Drilled Shafts in Stabilizing a Slope, Lymon C. Reese, Shin-Tower Wang and Jeffrey L. Fouse, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332.

Education

Are You Ready for Spaghetti (Bridges, That Is)?, CE Sept. 92, p80.

Beyond Push-Button GPS, Alfred Leick, CE June 92, p75-76.

Bringing Ecology to the Classroom, CE Jan. 92, p11. Calling All Living Legends, CE Jan. 92, p11. A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

per Union Aids Ex-Soviet Engineers, CE Sept. 92, p15.

Curriculum for Future Civil Engineers: Practitioner's Viewpoint, Guy E. Jester, El Oct. 89, p357-362.

Education: Gateway to the Solution, Ginger P. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10.

Education Issues in 1992, Casey Dinges, CE Feb. 92,

Engineer Returns to Roots to Lecture School Children, NE Apr. 92, p16.

NE Apr. 92, p10.

Regineers Week Participation Takes Many Forms for Civil Engineers, NE Apr. 92, p16.

Enhancing the Partnership—Improving Public Awareness Through Education and Information, Carol L. Hanlon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1794-1798.

Exercises With an Educational Package on Radioactive

Committee, 1992, p.179-1790.

Experience With an Educational Package on Radioactive Waste Management in a Country Having no Nuclear Power Programme, P. Krejis and G. Ehrenstrasser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1491-1493.

From Toothpicks, a Strong Base for Engineering Careers, CE June 92, p82-83.

CE June 92, p82-83.
In-House Training, Formal Education and Public Outreach, Yolanda A. Willis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2190-2201.
An Interdisciplinary Approach to Learning and Teaching About Nuclear Waste Management, Roberta A. Scull, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1807-1812.
An International Education Agenda in Nuclear Energy

mittee, 1992), pl807-1812.

An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Century: Beyond Engleberg, Richard R. Powell, Edward James and Alfred Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1494-1498. It's Back to School for Engineers, CE Apr. 92, p10. Limited View Limits Engineers (Itr), Ralph M. Hansen, CE Feb. 92, p32,35. Milyaukee Summer Institute Gives Sunday.

Milwaukee Summer Institute Gives Students CE Project Experience, CE Feb. 92, p70,72. The Most Dangerous Technology Ever Built, CC Oct. 92,

p8,12.

po, 12.

Novel University-Industry-Government Partnership,
Constantine N. Papadakis, Paul C. Claspy, Theo G.
Keith and Michael J. Salkind, Engineering, Construin, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992),
p2128-2138.

Perspectives on the Science Advisor Program at Sandia National Laboratories, P. C. Bennett, R. B. Heath, A. Vallesny and P. A. Channon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1826-1831.

Phoblase and Indeptification of University Constitute. A

Phobias and Underutilization of University Scientists: A Suggested Program, Ye's T. Mandra, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1799-1806.

Portrait of a Manager, Paul Tarricone, CE Aug. 92, p52-

Qualifications Not a Matter of Degrees (ltr), Wilson V. Binger, CE Jan. 92, p28.

Science and Students: Yucca Mountain Project's Educa-tional Outreach and Public Tour Programs, April Van-Camp Gil, Paula Austin, Erin L. Larkin and Effie Harle, (High Level Radioactive Waste Management, High Level Radio Committee, 1992), p1819-1825.

Committee, 1972, p1615-1022.
Social and Science Issues in the Local Environment, L.
Gilbert and M. Robinson, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1813-1818.

The Initiation of Bifurcations and Localization in Damaging Materials, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, et and John M. Niedzwecki, ed., 1992), p365-368.

Linking Design Data with Knowledge-Based Construction Systems, H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753.

Nonlinear Eigensolver for Exact Vibration Analysis, H. A. Smith, D. C. Sorensen and R. K. Singh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p920-923.

Optimal Discretization of Random Fields for SFEM, Chun-Ching Li and A. Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p29-32.

Y. K. Lin, ed., 1992), p.29-32.
Probabilistic Rotordynamics Analysis Using an Adaptive Importance Sampling Method, Y.-T. Wu, T. Y. Torng, O. H. Burnside and M. H. Rheinfurth, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p491-494.
Pseudo-Simulation Method for Stochastic Problems, B. A. Zeldin and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p37-40.
Reduced Basis Technique for Nonlinear Vibrations of

Reduced Basis Technique for Nonlinear Vibrations of Composite Panels, Ahmed K. Noor, C. M. Andersen and Jeanne M. Peters, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883.

Stochastic FEM Based on Local Averages of Random Vector Fields, W. Q. Zhu, Y. J. Ren and W. Q. Wu, EM Mar. 92, p496-511.

Linking Design Data with Knowledge-Based Construc-tion Systems, H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753.

Stochastic FEM Based on Local Averages of Random Vector Fields, W. Q. Zhu, Y. J. Ren and W. Q. Wu, EM Mar. 92, p496-511.

Construction under Fire, Ralph D. Ellis, Jr., CE Nov. 91, p51-53.

Elastic analysis

Analysis for Soil Reinforcement with Bending Stiffness, R. A. Jewell and M. J. Pedley, GT Oct. 92, p1505-1528. Elastic Analysis of Submarine Pipelines, Poon-Hwei Chuang and David Lloyd Smith, ST Jan. 92, p90-107.

Elastic Buckling of Incomplete Composite Plates, Koichi Sato, EM Jan. 92, p1-19.

Elastic Solutions for Arbitrarily Shaped Foundations, K. S. Li, GT June 92, p938-942.
Elastic Stability of Heavy Rotating Columns, C. M. Wang, EM Jan. 90, p234-239.

Elastic foundations

Dynamic Response of Beams on Elastic Foundation, Yew Chin Lai, Bing Yuan Ting, Woon-Sung Lee and Bryan R. Becker, ST Mar. 92, p853-858.

Hypar Shell on Pasternak Foundation, D. N. Paliwal, S. N. Sinha and A. Ahmad, EM July 92, p1303-1316. Modified Vlasov Model for Beams on Elastic Founda-tions, C. V. Girija Vallabhan and Y. C. Das, GT June 91, p956-966.

Plates on Elastic Foundation, David S. Chilton and Jerzy W. Wekezer, ST Nov. 90, p3236-3241.Sensitivity Analysis of Thin-Walled I-Beams Resting on Elastic Foundation, B. B. Budkowska and C. Szyme-zak, EM June 92, p1239-1248.

Stress Wave Interaction in Finite Beam on Elastic Foundation, M. C. Wang and C. S. Little, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p580-583.

Timoshenko Beam Element Resting on Two-Parameter Elastic Foundation, L. M. Shirima and M. W. Giger, EM Feb. 92, p280-295.

Elastic media

Dynamics of Saturated Rocks. IV: Column and Borehole Problems, Irene Vgenopoulou and Dimitri E. Beskos, EM Sept. 92, p1795-1813.

An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, Y. Wang and R. K. N. D. Rajapakse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1008-10:1. Numerical Simulation of a Sphere Moving Down an Incline with Identical Spheres Placed Equally Apart, Chi-Hai Ling, Chyan-Deng Jan, Cheng-lung Chen and Hsieh Wen Shen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767.

Response of Cross-Anisotropic Seabed to Ocean Waves, Behrouz Gatmiri, GT Sept. 92, p1295-1314.

185

Benrous Outmin, OT Sept. 92, p1295-1314.

Elastic moduli

Mechanical Characterization of the Soft Tissue in Horse

Hooves, Harry A. Hogan and David M. Hood, (Engineering Mechanics, Loren D. Lutes, ed. and John M.

Niedzwecki, ed., 1992), p147-150.

Pressuremeter and MDD Moduli for Road Design, P. J.

Sanders, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.

Eaton, ed., 1992), p367-381.

Elastic properties
Comparison of Micromechanical Models for Elastic
Properties, Cliff J. Lissenden and Carl T. Herakovich, Comparison or micromechanical Models for Elastic Properties, Ciiff J. Lissenden and Carl T. Herakovich, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1309-1322.

The Diagnosis of Pavement IIIs, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79. Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, GT May 90, p714-789.

Inverse Analysis of Geotechnical Parameters on Improved Soft Bangkok Clay, Denner T. Bergado, Apollo S. Enriquez, Casan L. Sampaco, Marolo C. Alfaro and A. S. Balasubramanaiam, GT July 92, p1012-1030.

Large Deformation Elastic Behavior of Low-Density Solid Foams, William E. Warren and Andrew M. Kraynik, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p143-146.

Micromechanics and Effective Properties of Elastic Particulate Composites, J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p95-98.

1992), p95-98.

Straight, Single-Tapered Composite I-Beams of Orthotropic Materials, Robert J. Leichti and Chai H. Yoo, MT Nov. 92, p399-414.

May I Nov. 24, p339-414.

Wave Interaction with Fluid Mud in Rectangular Trench,
Francis C. K. Ting, (Engineering Mechanics, Loren D.

Lutes, ed. and John M. Niedzwecki, ed., 1992), p7578.

Elasticity
Bending of Rectangular Cross-Section Cantilever with
Cylindrical Cutouts, A. K. Naghdi, EM Apr. 92, p831842.

842.

Buckling of Skew Plates and Corner Condition for Simply Supported Edges, C. M. Wang, K. M. Liew and W. A. M. Alwis, EM Apr. 92, p651-662.

Complementary Potentials of Finite Elasticity, Gerald Wempner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p506-509.

Constitutive Equation for Granular Material by Hypocalasticity, R. K. Mysore and W. E. Falby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p733-736.

Distortional Buckling Solutions for Continuous Composite Beams, Mark Andrew Bradford and Zhi Gao, ST Jan. 92, p73-89.

Dugdale Model Applied to Crack Interactions, K. Shah, H. Stolarski and J. F. Labuz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p498-501.

1992, p498-501.

Dynamic Elastic-Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. 92, p2005-2016.

94, p.2003-2016.

Effective Strength of 'Square-and-Diagnonal' Double-Layer Grid, Toshitsugu Saka and Yoshiya Taniguchi, ST Jan. 92, p52-72.

Elastic Stability of Composite Column, Yaxin Li, EM Nov. 92, p2320-2327.

An Elasticity Solution for a Transversely Isotropic Material Containing a Spherical Shell Under Arbitrary Asisymmetric Loading, J.-Y. Wang and S. M. Henrich, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1020-1023.

Energy Equation for Beam Lateral Buckling, Yong Lin Pi, N. S. Trahair and S. Rajasekaran, ST June 92, p1462-

Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp.

Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp. Family of Iterative Shear-Deformation Theories for Shalow Shells, Zenon Rychter, EM Nov. 92, p2159-2175. Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, J. Larralde, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654. Flow-Deformation Response of Dual-Proosity Media, Derek Elsworth and Mao Bai, GT Jan. 92, p107-124. Frictionless Contact with BEM Using Quadratic Programming, Srdan Simunović and Sunil Saigal, EM Sept. 92, p1876-1891. Functional Analysis in Continuum and Structural Me-

Grant J. A. Janus and J. Structural Mechanics, C. A. Nelson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p514-518.

High Strength, Low Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 3563-372.

Highly Accurate Adaptive hp-Methods for Linear Elastos-tatics, J. Tinsley Oden, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p628-631.

fluence of Seafloor on Acoustic Plane Wave, L. H. Huang, EM Oct. 92, p1987-2004.

Minimal Storage Finite Element Solution of Large-Scale Three-Dimensional Elastodynamic Problems, S. Has-sanzadeh, S. Foresti, H. Murakami and V. Sonnad, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p762-769.

Nonlinear Behaviour of Schneebeli Packings, Daniel Bideau, Jean-Paul Troadec and Claude Poirier, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p167-170.

Normalizing Inelastic Seismic Response of Structures Having Eccentricities in Plan, Michel Bruneau and Stephen A. Mahin, ST Dec. 90, p3358-3379.

Numerical Simulation of a Sphere Moving Down an Incline with Identical Spheres Placed Equally Apart, Chi-Hai Ling, Chyan-Deng Jan, Cheng-lung Chen and Hsieh Wen Shen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767

Parallelization of Linear Finite Element Analysis, Gwo-long Lai and Hsin-Chu Chen, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p655-662.

Pavement Instrumentation for Verifying Elastic Theory, S. Nazarian, E. Y. Chai and D. R. Alexander, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p306-320.

allout Stiffness of Elastic Anchors in Slope Stabilization Systems, Roman D. Hryciw and Masyhur Irsyam, GT June 92, p902-919.

Stresses Induced by Surficial and Deep Loading in Elastic Medium, Olivier Rossa and Gabriel Auvinet, GT Aug. 92, p1241-1246.

The Theory of Elasticity: 1950-1992 and Beyond: Concluding Remarks, Lawrence E. Goodman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p637-639.

Three-Dimensional Solutions for Thermal Buckling of Multilayered Anisotropic Plates, Ahmed K. Noor and W. Scott Burton, EM Apr. 92, p683-701.

Torsional Stresses in Tubular Lap Joints with Tapered Adherends, D. Chen and S. Cheng, EM Sept. 92, p1962-1973.

Properties of PVB Interlayer Used in Laminated Glass, C. V. Girija Vallabhan, Y. C. Das and Manjunatha Ramasamudra, MT Feb. 92, p71-76.

Computational Gradient Plasticity, R. de Borst, H. -B. Mühlhaus and J. Pamin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 9776-779.

Elastoplastic Nonlinear Analysis of Flexibly Jointed Space Frames, Faris G. A. Al-Bermani and Stritawat Kitipornchai, ST Jan. 92, p108-127.

Kitipornchai, ST Jan. 92, p108-127.
Evaluation of Plastie Bifurcation for Plane Strain versus Axisymmetry, Dunja Perić, Kenneth Runesson and Stein Sture, EM Mar. 92, p512-524.
Geometric and Material Nonlinear Analysis of Thin-Walled Beam-Columns, J. L. Meek and W. J. Lin, ST June 90, p1473-1490.
Hypoplastic Model for Sands, J. P. Bardet, EM Sept. 90,

p1973-1994.

Cyclically Varying Loads, Sidney A. Guralnick, Thomas Erber, Osama Soudan and Jixing He, ST June 91, p1815-1833.

cycincaity '42ring Loads, Sidney A. Curalnick, Thomas Erber, Oaama Soudan and Jixing He, ST June 91, p1815-1833.

The Initiation of Bifurcations and Localization in Damaging Materials, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p365-368.

Numerical Implementation of Nonlocal Elastoplastic Damage Theory, H. Murakami and H. E. Read, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p248-251.

On the Bifurcation of Elastor-Plastic Crystals During Multiple Slip, Ronaldo I. Borja and Jon R. Wren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p284-287.

Rate-Dependent Plasticity Representation for Energy-Absorbing Materials, Q. H. Zuo, A. K. Maji, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p151-154.

Relationships Between Error Estimation and Adaptive Computations in Strain Localization, D. Aubry and B. Tie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283.

Reliability Analysis of Degrading Dynamic Systems with Applications, Mircea Grigoriu and Geotechnical Reliability, Y. K. Lin, ed., 1992), p300-303.

Revised Cam-Clay Model, B. R. Srinivasa Murthy, A. Vastala and T. S. Nagaraj, GT June 91, p851-871.

Simple Double-Hardening Model for Geomaterials, Sunirmal Baneriee, Robert O. Davis and Kandiah Sribalaskandarjah, GT June 92, p889-901.

Single-Hardening Model with Application to NC Clay, Poul V. Lade, GT Mar. 90, p394-414.

Skin Friction Distributions on Piles in Sand, Nazrul I. Khan, John S. Templeton, III. and Michael W. O'Neill, (Civil Testineering to the Control of the Control

Kin Friction Distributions on Piles in Sand, Nazzul I. Khan, John S. Templeton, III. and Michael W. O'Neill, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p783-797.

Electric power plants

Assessment of Impacts Associated with Alternate Cooling

System Designs for an Electric Power Station, Steven

H. Wolf, James D. Bowen, Donald P. Galya and Frank

S. Smith, (Environmental Engineering: Saving a

Threatened Resource—In Search of Solutions, F. Pierce

Linaweaver, ed., 1992), p226-231.

Parish Congress for a Lunar Electric Power System, Ken-

Linaweaver, ed., 1992), p226-231.
Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p774-785.

Millet, ed., 1992, p. 174-182.
INTERLUNE Concept for Helium-3 Fusion Development, Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.804

A Mars 1 Watt Vortex Wind Energy Machine, Michael Ralston, Christopher Crowley, Ronald Thomson and Owen Gwynne, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992a, p786-797.

Electric power transmission
Lunar-Based System to Supply Power to Earth: Summary
of Concept, Benefits, and Development, David R. Criswell, (Engineering, Construction, and Operations in
Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p2392-2399.

Electrical conductivity
Electrokinetic Cleanups, Yalcin B. Acar, CE Oct. 92, p58-60.

Electrokinetic Soil Processing (A Review of the State of the Art), Yalcin B. Acar, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1420-1432.

Metallized Microballoon EMI Shielding Materials, Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.

Phenol Removal from Kaolinite by Electrokinetics, Valcin B. Acar, Heyi Li and Robert J. Gale, GT Nov. 92, p1837-1852.

Salinity of Rivers: Transfer Function-Noise Approach, IR May/June 92, p343-359.

Electrical equipment
Principles of Ground Modification with Electromagnetic
Waves, J. C. Santamarina and Y. N. Wakim, Grouting,
Soil Improvement and Geosynthetics, Roy H. Borden,
ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),
p1380-1392.

Electrical resistivity

Electrical resistivity
Estimation of Chemical Grout Void Filling by Electrical
Resistivity, Hideo Komine, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p372-383.
Use of D-C Resistivity to Map Saline Ground Water,
Christina L. Stamos, Steven K. Predmore and Adel A.
R. Zohdy, (Irrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman,
ed., 1992), p80-85.

Electrification

Phenol Removal from Kaolinite by Electrokinetics, Yal-cin B. Acar, Heyi Li and Robert J. Gale, GT Nov. 92, p1837-1852.

Cin B. Acar, Hey Li and Robert J. Gaie, GT Nov. 92, p1837-1852.

Electrolysis

Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p74-785.

A Modified Sulfate Process to Lunar Oxygen, Thomas A. Sullivan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p641-650.

Production of Oxygen by Electro-Reduction of Lunar Ores, B. Mishra, D. L. Olson, J. J. Moore and W. A. Averill, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677.

Steady State Composition with Low Fe<sup>2+</sup> Concentrations for Efficient Op Production by "Magma" Electrolysis of Lunar Soils, Larry A. Haskin and Russell O. Colson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p651-665.

Electronic equipment

Electronic equipment
Electronic equipment
Electronic Theodolites: Comparison Test, Abdalla Elsadig Ali, SU Feb. 91, p.3-8.
Operations Planning for Space Station FREEDOM—and
Beyond, Stephen S. Gibson, Thomas E. Martin and H.
Jeffrey Durham, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stcin Sture, ed.
and Russell J. Miller, ed., 1992), pl 500-1511.

Electroosmosis
Electroosmotic Contaminant-Removal Processes, Burton
A. Segall and Clifford J. Bruell, EE Jan./Feb. 92, p84-

TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

Elevation
HGL Elevation at Pipe Exit of USBR Type VI Impact
Basin, Charles E. Rice and Kem C. Kadavy, HY July
91, p929-933.

Orthometric Heights from Global Positioning System, Je-rome Fiedler, SU Aug. 92, p70-79.

Embankment stability
FS-1.5: Is It Appropriate for Embankment Design? Scott
A. Ashford, Lawrence H. Roth, Sandra L. Madsen and
Donald G. Anderson, (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p1112-1125.
Gabions and Geogrids, Alfred H. Brand, CE Sept. 92,
p65-67.

Long Term Behavior of Urban Fill Embankments, J. David Rogers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1258-1273.

Performance of Test Embankment Constructed to Failure on Soft Marine Clay, B. Indraratna, A. S. Balasu-bramaniam and S. Balachandran, GT Jan. 92, p12-33.

Simple Procedure for Determining Cap-Plasticity-Model Parameters, Tien-Kuen Huang and Wai-Fah Chen, GT Mar. 90, p492-513.

Stability and Performance of Slopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, 0-87262-872-8, 1574pp.

Stability of Embankments over Weak Soils of Limited Thickness, Radoslaw L. Michalowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1142-

Analysis of Slope Failure and Remedial Design of an Earth Dam, Michael J. Mann and Robert E. Snow, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p923-939.

Application of EPS for Slide Correction, Shan-Tai Yeh and John B. Gilmore, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1444-1456.

Bearing Capacity on Nonhomogeneous Cohesive Soils under Embankments, Radoslaw L. Michalowski, GT July 92, p1098-1118.

Case History Evaluating Field Vane Correction Factors, W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani and Henry T. Taylor, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p737-755.

Cement-Stabilized Soil for Coal Retaining Berms, Gary J. Van Riessen and Kenneth D. Hansen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p981-

Construction and Performance of Two Large Rockfill Embankments, Gordon M. Matheson and William F. Parent, GT Dec. 89, p1699-1716.

Design of the Charter Oak Bridge Embankments, Alec D. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p721-736.

Discontinuous Deformation Slope Stability Analyses, An-Bin Huang and Max Y. Ma. (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p479-492.

Earthquake-Induced Permanent Deformations: Probabilistic Approach, M. K. Yegian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50.

The Evolution of Geotextile Reinforced Embankments, C. Joel Sprague and Michael Koutsourais, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), ed., Robert p1129-1141.

FS-1.5: Is It Appropriate for Embankment Design? Scott A. Ashford, Lawrence H. Roth, Sandra L. Madsen and Donald G. Anderson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1112-1125.

Gabions and Geogrids, Alfred H. Brand, CE Sept. 92,

Hydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, Victor R. Hasfurther and John P. Turner, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p395-400.

Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227.

Investigation of Mackay Dam Following the 1983 Borah Peak Earthquake, Leslie F. Harder, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p956-

LASSAP, Stress and Settlement Analysis and Design Program, Clarence Jiang, K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p426-433.

Movement of Slopes During Rapid and Slow Drawdown, Ronaldo I. Borja and Sunil S. Kishnani, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404

413

A New Design Chart for Reinforced Embankments, M. Soubra, C. Coulet and D. Rakotondramanitra, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. 1163-1174.

On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p95-115.

Boulanger, ed., 1992), p95-113.

One-Dimensional Settlement Analysis for Embankments, Peter A. Stauffer, Richard R. Davidson, Richard S. Ladd and David B. Paul, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403.

Performance of Test Embankment Constructed to Failure on Soft Marine Clay, B. Indraratha, A. S. Balasubramaniam and S. Balachandran, GT Jan. 92, p12-33.

Performance of Test Elli Constructed on Soft Pages P. Performance of Test Elli Constructed on Soft Pages P.

Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hult-gren, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p775-787.

Plastic Waste for Low-Weight Embankments, H. El Ghoche, C. Coulet and D. Daudon, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1368-

Problems Related to Disposal of Fly Ash and its Utiliza-tion as a Structural Fill, Buddhima Indraratna, (Utili-zation of Waste Materials in Civil Engineering Con-struction, Hilary I. Inyang, ed. and Kenneth L. Berge-son, ed., 1992), p274-285.

Properties of Tire Chips for Lightweight Fill, Dana N. Humphrey and William P. Manion, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1344

1355.

Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.

Reliability and Probability in Stability Analysis, John T. Christian, Charles C. Ladd and Gregory B. Baccher, Stability and Performance of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1071-1111.

Review of Wetting-Induced Collapse in Compacted Soil, Evert C. Lawton, Richard J. Fragaszy and Mark D. Hetherington, GT Sept. 92, p1376-1394. Selection of Ground Motions for the Seismic Evaluation of Embankments, Robert K. Green, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p593-607.

Simple Procedure for Determining Cap-Plasticity-Model Parameters, Tien-Kuen Huang and Wai-Fah Chen, GT

Mar. 90, p492-513.

Site Qualification for Inclinometer Surveyng Using Tiltmeters, Howard Egan, Gary R. Holzhausen and Dan Sampson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551.

Stability Analysis of Reinforced Embankments on Soft Soils, Shenbaga R. Kaniraj and Hasan Abdullah, GT Dec. 92, p1994-1999.

Stability and Performance of Slopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, 0-87262-872-8, 1574pp.

Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049.

Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1050-1065.

Stability of Overtopped Embankment Dams, Ashok K. Chugh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p414-428.

Stability of the Olga C Test Embankment, J. G. Lavallée, G. St-Arnaud, R. Gervais and Y. Hammamij, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p1006-1021.

Subaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744.

Two Full Size Structures Reinforced by Geotextiles, Ph. Delmas, Ph. Gotteland, J. P. Gourc and S. Haïdar, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1201-1212.

Two-Dimensional Flow in Embankments, Nazeer Ahmed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p636-641.

Undrained Analysis of Slopes Based on Effective Stress Methods, John F. Peters, Chris L. Saucier and Oswald Rendon-Herrero, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p493-505.

Model for Estimating Tidal Flushing of Small Embayments, Lawrence P. Sanford, William C. Boicourt and Stephen R. Rives, WW Nov./Dec. 92, p635-654.

Modeling of CSO Impacts in Jamaica Bay and Tributar-ies, John P. St. John, William M. Leo and Robert Gaf-foglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-93.

Cone Models for a Pile Foundation, John P. Wolf, Jethro W. Meek and Chongmin Song, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p94-113.

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401.

Rocking Impedance of Embedded Strip Foundations in Layered Soil, A. Bharadwaj and S. Ahmad, GT May 92.

Torsional Radiation Damping of Arbitrarily Shaped Em-bedded Foundations, Shahid Ahmad and George Gaze-tas, GT Aug. 92, p1186-1199.

Torsional Stiffness of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, p1168-1185.

Upper Bound Limit Analysis of Deep Skirt Structures' Foundations, Andrew V. Maller and James D. Murff, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p571-584.

Ductile Multiple-Anchor Steel-to-Concrete Connections, Ronald A. Cook and Richard E. Klingner, ST June 92, p1645-1665.

Pipeline Storm Behavior on Clay Soils, Derek V. Morris, Tony S. Yen, Wayne A. Dunlap and James R. Hale, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p560-570.

Emergency services
Data Needs for Locating Emergency Response Units,
George F. List, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p437-441.

Design Storms for Emergency Spillways of SWM Ponds, Oner Yucel, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p934-939.

Evacuation Modeling Near a Chemical Stockpile Site, Donald E. Newsom, Marc A. Madore and Robert T. Jaske, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p180-184.

An Evaluation of Highway Flood Damage Statistics, Jen-nifer Rhodes and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1082-1087.

LGG System for Emergency Response Applications, Anthony A. Saka, SU Aug. 92, p90-98.
Timely Technology: GIS Use in the U.S., CC Nov. 92, p12-13.

# Emission control

J. Barboza, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p79-85.

Alternative Fuels and Their Relations to TCM's for Santa Barbara County, Mahesh Talwar, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992),

p327-346.
California's Tradable Emissions Policy and Greenhouse
Gas Control, John P. Dwyer, EY Aug. 92, p59-76.
Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of
1990, Ronald J. Roggenburk, (Transportation Planning
and Air Quality, Roger L. Wayson, ed., 1992), p46-55.
Tradaction as Industrial Toxics Management Program.

Developing an Industrial Toxics Management Program, Kathleen O. Gill and Tatiana Gianella, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p42-48.

Diesel as Case of Consumer Choice in Alternative Transport Fuels, Joel R. Couse, EY Aug. 92, p95-108.

The Effectiveness of Telecommuting as a Transportation Control Measure, Srikanth Sampath, Somitra Saxena and Pairicia L. Mokhtarian, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p347-362.

362.
Sevaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Morrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210.
In-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-254.
Laborator Tests of Modal Emissions and Officials Control

Laboratory Tests of Modal Emissions and Off-Cycle Cor-rections to FTP-75, Mark A. Carlock, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p211-218.

p211-218.
Overview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Ikenberry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1200-1204.
Toward a Low-Emissions Wastewater Treatment Plant, Albert B. Pincince, (Environmental Engineering: Saving a Threatmend Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p1-6.
Transportation Planning and Air Ouslitt, Roger I. Way.

Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992, 0-87262-815-9, 374pp.

Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A High-way Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p14-29

Travel Markets: An Approach to TCM Effectiveness Evaluation, Donald A. Torluemke, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p177-181.

VOCs: The New Effluent, Teresa Austin, CE Mar. 92, p42-45.

VOCs: The New Effluent, Teresa Austin, CE Mar. 92, p42-45.

Alternative Fuels and Their Relations to TCM's for Santa Barbara County, Mahesh Talwar, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p327-346.

ALWP-67: A Little-Known Big Nuclear Accident, N. G. Botov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2331-2338.

California's Tradable Emissions Policy and Greenhouse Gas Control, John P. Dwyer, EY Aug. 92, p59-76.

Characteristics of MOBILE4 and EMFAC7E Models, Julie Fieber, Barbara Austin and Jeremy Heiken, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p255-570.

ed., 1992), p.255-570.
Comparison of Dispersion Models for Wastewater Treatment Emissions, Jin-Sheng Lin and Lynn M. Hildemann, (Environmental Engineering: Saving a Threatmend Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11.
Developing Protocols for Motor Vehicle Air Quality Modeling, Peter H. Guldberg, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p306-314.

p306-314.

Dynamic Modeling of VOC Emissions in HPO Process, Chwen-Jeng Tzeng, Roger W. Babcock, Jr., Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p67-72.

Estimating VOC Emission Rates in Aeration Systems, Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p73-78.

1992), p73-78. Estimation of Travel Related Inputs to Air Quality Models, Terry L. Miller, Arun Chatterjee, Jerry Everett and Cindy McIlvaine, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125. Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Morrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210. Generating Detailed Emissions Forecasts Using Regional Transportation Models: Current Capabilities and Issues, Robert G. Ireson, Julie L. Fieber and Marianne C. Causlev, (Transportation Planning and Air Quality, Ouglity, Output Capabilities and Issues, Robert G. Ireson, Julie L. Fieber and Marianne C. Causlev, (Transportation Planning and Air Quality, Output Capabilities and Issues, Robert G. Ireson, Julie L. Fieber and Marianne C.

sues, Robert G. Ireson, Julie L. Fieber and Marianne C. Causley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p142-160.

Incineration—Panacea or Pandemic? Harvey W. Rogers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p157-162.

Integrated Software for Transportation Emissions Analysis, William Loudon and Malcolm Quint, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p161-176.

1992, p101-19.
Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, Guido Schattanek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p315-326.
Intersection Air Quality Analysis, John Zamurs, Robert Conway and Stephen S. Rosen, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p335-336.

ning and p283-297.

-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transpor-tation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-254.

Laboratory Tests of Modal Emissions and Off-Cycle Corrections to FTP-75, Mark A. Carlock, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p211-218.

p211-218.

Modeling Guideline for Air Quality Analysis of Intersections, George J. Schewe, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p298-305.

Modelling the Effect of Atmospheric Emissions on Groundwater Composition, Theress J. Brown, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2318-2322.

Oxygen Transfer and VOC Emissions from Sewer Drop Structures, Richard L. Corsi, Jennifer Shepherd, Lori Kalich, Hugh Monteith and Henryk Melcer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p303-310.

Performance-Assessment Comparisons for a Repository

Bhowmik, ed., 1992), p.305-310.

Performance-Assessment Comparisons for a Repository Containing LWR Spent Fuel or Partitioned/ Transmuted Nuclear Waste, R. W. Barnard and W. W.-L. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1397-1403.

gram Committee, 1992, p.1397-1403.
Physical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SY-101, Rudolph T. Allemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p610-614.

Potential Increases in Natural Radon Emissions Due to Heating of the Yucca Mountain Rock Mass, C. Pescatore and T. M. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1599-1606. Releases From Exotic Waste Packages from Partitioning and Transmutation, William W.-L. Lee and Jor-Shan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Play Level Radioactive Waste Management, Summary of Roundtable Discussion on Modeling Issues, Paul E. Benson, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278.

Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992, 0-87262-815-9, 374pp.

Transportation Planning and Requirements of the Federal

Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A High-way Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992).

p14-29.

VMT for Air Quality Purposes, Christopher R. Fleet and Patrick DeCorla-Souza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p126-141.

Empirical equations

Bed-Load and Suspended-Load Transport of Nonuniform Sediments, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY June 91, p774-787.

Empirical Estimation of Double-Layer Repulsive Force between Two Inclined Clay Particles of Finite Length, Ning Lu and A. Anandarajah, GT Apr. 92, p628-634.

Formulas for Shear-Lag Effect of Tr., and Ir., and Bos Beams, Qi-gen Song and Alexander C. Scordelis, ST May 90, p1306-1318.

Postdensification Penetration Resistance of Clean Sands.

ostdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115. mple and Accurate Friction Loss Equation for Plastic Pipe, R. D. von Bernuth, IR Mar/Apr. 90, p294-298.

Employee benefits ASCE 1991 Salary Survey: Summary of Findings, Com-mittee on Employment Conditions and Professional Activities Staff, El Apr. 92, p167-189.

Employee relations
Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92,
p667-676.

p667-676. Four Propositions for Quality Management of Design Organizations, Donald H. Kline and Gregory B. Coleman, ME Jan, 92, p15-26.
Nommonetary Incentives: It Can be Done, Gary W. Fischer and Norman P. Num, ME Jan, 92, p40-52.
Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

amo Alexander and Alexander an

Employment Estimating Functional Population for Facility Planning, Arthur C. Nelson and James C. Nicholas, UP June 92, p45-58

Housing Opportunity or Social Engineering Implement-ing the Jobs-Housing Relationship—The Town of Wel-lington Experience, Jean E. Lindsey, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p82-90.

Employment conditions
ASCE 1991 Salary Survey: Summary of Findings, Committee on Employment Conditions and Professional Activities Staff, El Apr. 92, p167-189.
Issues in Human Resources: Managing Talent in the 21st Century, Linda Allen and Joseph Sewards, ME Oct. 92, p340-345.

Managing and Motivating People on a Joint Venture Pro-ject, J. Daniel Carrier, ME Oct. 92, p362-366. New Ethical Standards Issued for Federal Employees, NE

Sept. 92, p3. enure—Analysis for Professional Engineers in Eduction, William Lawson Magette, El Apr. 90, p142-147.

Employment opportunities ABET Seeks Deputy, CE Aug. 92, p68.

Providing Lead Role in Work-Force Diversity, Robert E. Wolfe and Marie E. Anspach, El Jan. 92, p38-48.

Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561.

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.

Disposal of Failed Melters from Defense Waste Vitrifica-tion Facilities, P. J. Brackenbury, J. King and E. C. Norman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2381-2386.

Committee, 1992, p2.501-2500.

Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, Kanwar Raj, M. S. Kumra and A. N. Prasad, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p899-903.

Evaluations of Glass Vitrification Techniques on Iron Ratio Determinations, R. B. Spencer, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2399-2405

p2399-2403.

First-Order Model for Durability of Hanford Waste Glasses as a Function of Composition, Pavel R. Hrma, Gregory F. Piepel, Michael J. Schweiger and Donald E. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1236-1243.

HLW Immobilization in Glass: Industrial Operation and Product Quality, P. Leroy, N. Jacquet-Francillon and S. Runge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p566-573.

p549-556

Phase Stability of Simulated Nuclear Waste Glasses, I. Joseph, T. V. Palmiter and L. D. Pye, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992).

p911-910.
A Pilot Scale Demonstration of the DWPF Process Control and Product Verification Strategy, Nick D. Hutson, Carol M. Jantzen and D. Chris Beam, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 255 257. p525-532

Projected Compositions and Radiogenic Properties of DWPF Glasses, J. R. Fowler and M. J. Plodinec, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p904-910.

Quality Assurance at a High Level Waste Plant—The Successful Approval of WVP, Sellafield to B\$5882/ ISO9002, Tim Houghton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p562-565.

The Remote Monitoring of Waste Glass Melter Product, K. K. Li and A. Schneider, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p533-540.

Management Program Committee, 1992), p535-540.
Some Aspects Concerning the Design of High Level Waste Vitrification and Storage Facilities, V. A. Kurnosov, M. V. Strakhov, V. T. Sorokin and A. E. Kozlov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2387-2394.

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, S. L. Marra, R. E. Ed-wards and C. M. Jantzen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924.

Transportation, Interim Storage, and Disposal Alterna-tive for Vitrified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

Elastoplastic Nonlinear Analysis of Flexibly Jointed Space Frames, Faris G. A. Al-Bermani and Stritawat Kitipornchai, ST Jan. 92, p108-127.

Dynamic Compaction: Predicting Depth of Improve-ment, Vince Luongo, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p927-939.

Editor's Preface, Richard J. Seymour, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p1-3.

Energy Equation for Beam Lateral Buckling, Yong Lin Pi, N. S. Trahair and S. Rajasekaran, ST June 92, p1462-1479.

Evaluation of Seismic Vulnerability of Highway Bridges in the Eastern United States, J. B. Mander, F. D. Panthaki and M. T. Chaudhary, *Lifeline Earthquake* Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86.

Facilitating Technology for Electric Power Generation, Ian Pope, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p276-292.

Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, Mark P. Nathan, Frank Barnes, Hon-Yim Ko and Stein Sture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-457.

Momentum and Energy Coefficients Based on Power-Law Velocity Profile, Cheng-lung Chen, HY Nov. 92, p1571-1584.

Novel Combined-Cycle Low-Temperature Engine Sys-tem, Joel H. Rosenblatt, EY Dec. 92, p209-223.

Power Flow and Energy in Primary-Secondary Syste G. Chen and T. T. Soong, EM May 92, p1046-1051.

Prebuckling Deflections and Lateral Buckling. I: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Applications, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2967-2985.

Rush of Legislation Concludes 102nd Congress, Casey Dinges, CE Dec. 92, p112.

Confinement Steel Requirements for Connections in Ductile Frames, M. R. Ehsani and J. K. Wight, ST Mar. 90, p751-767.

Constitutive Modeling and Simulation of Energy Absorbing Polyurethane Foam Under Impact Loading, James A. Sherwood and Colin C. Frost, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158.

Crushing Response of Energy Absorbing Composite Structure, Gary L. Farley, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p876-879.

A New Concrete Armor Unit for Breakwaters: The "Beta Block", José María Berenguer, Vicente S. Naverac and José Manuel de la Peña, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p66-678.

Rate-Dependent Plasticity Representation for Energy-Absorbing Materials, Q. H. Zuo, A. K. Maji, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p151-154.

BEST: New Satellite Mission Dedicated to Tropical Sys-tem Energy Budget, M. Orgeret, AS Jan. 92, p1-11.

Energy Efficient Pump Station Operation with a Pump Switching Constraint, Kofi Awumah and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p604-609.

Performance Specifications for the Design and Manufac-ture of Energy Efficient Housing in the 21st Century, Ronald Kellett, Mark DeKay, Brook Muller, Donald Peting and G. Z. Brown, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p101-110

A Sphere Moving Down an Inclined Bumpy Surface, Chy-an-Deng Jan, Hsieh Wen Shen, Chi-Hai Ling and Cheng-lung Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-771.

Energy consumption
Engineering-Econometric Model of Energy Demand, Fabrizio Carlevaro, Jean-Luc Bertholet, Jean-Paul Chaze and Patrick Taffé, Ey Aug. 92, p109-121.

Canada Explores Sludge-to-Fuel Process, CE June 92, p18.

Enalitating Technology for Fuel Production and Energy-Enhanced Products, Patrick Takahashi, Charles Ki-noshita, Stephen Oney and Joseph Vadus, (Ocean En-ergy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p293-305.

ed., 1974), p237-303. Lunar-Based System to Supply Power to Earth: Summary of Concept, Benefits, and Development, David R. Cris-well, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2392-2399.

Positive Drift of a Backward-Bent Duct Barge, Michael E. McCormick and William E. Sheehan, WW Jan/Feb.

92, p106-111.

State of the Art in Wave Power Recovery, A. Douglas Carmichael and Johannes Falnes, (Ocean Energy Re-covery: the State of the Art, Richard J. Seymour, ed., 1992), pl 82-212.

Energy development
Facilitating Technology for Fuel Production and Energy-Enhanced Products, Patrick Takahashi, Charles Ki-noshita, Stephen Oney and Joseph Vadus, (Ocean En-ergy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p.293-303.

Massive Energy Bill Advances, Casey Dinges, CE Aug. 92, p96.

The State of the Art in Tidal Power Recovery, J. Gavin Warnock and Robert H. Clark, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p4-33.

Energy dissipaters

Pipe Plunge Pool Energy Dissipator, Fred W. Blaisdell
and Clayton L. Anderson, HY Mar. 91, p303-323.

Analysis of Spiral Vortex and Vertical Stot Vortex Drop Shadysis of Spiral Vortex and Vertical Stot Vortex Drop Shafts, Michael C. Quick, HY Mar. 90, p309-325.

Boundary Conditions for Sediment-Laden Flows, Marcelo H. Garcia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p404-

Energy Dissipation Characteristics of Rubber Cylinders, Dean L. Sicking, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p139-

Energy Dissipation in Determinate Steel Beams, Helen M. Goldsworthy and Len K. Stevens, ST Jan. 92, p1-

Energy Dissipation in Indeterminate Steel Beams, Helen M. Goldsworthy and Len K. Stevens, ST Jan. 92, p18-

Flow and Energy Dissipation Over Stepped Gabion Weirs, L. Peyras, P. Royet and G. Degoutte, HY May 92, p707-717.

Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, K. H. Frizell, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439.

Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227.

Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersaturation, Perry L. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 2311 316.

p311-316.
Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Hsu and Apostolos Fafitis, ST Sept. 92, p2459-2474.
Seismic-Energy Dissipation in MDOF Structures, Pierre Léger and Serge Dussault, ST May 92, p1251-1269.
Shoaling and Breaking of Random Wave Trains: Spectral Approaches, James T. Kirby, James M. Kaihatu and Hajime Mase, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p71-74.

Skimming Flow in Stepped Spillways, N. Rajaratnam, HY Apr. 90, p587-591.

HY Apr. 90, ps87-591.
Stabhity Theory of Cohesive Crack Model, Yuan N. Li and Robert Y. Liang, EM Mar. 92, p587-603.
Structural Seismic Damper, Manuel Aguirre and A. Roberto Sánchez, ST May 92, p1138-1171.

RODERO Sanchez, S1 May 92, p1138-1171.

Energy losses

Drop Manholes in Supercritical Pipelines, George C. Christodoulou, IR Jan./Feb. 91, p37-47.

Energy Loss at Combining Pipe Junction, Marc Serre, A. Jacob Odgaard and Rex A. Elder, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p766-771.

Head Losses in Storm Sewer Manholes: Submerged Jet Theory, Flemming Bo Pedersen and Ole Mark, HY Nov. 90, p1317-1328.

Turbulence, and Energy Loss, at Combining Pipe Juncture 1997.

Turbulence, and Energy Loss, at Combining Pipe Junctions, Marc Serre and A. Jacob Odgaard, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p389-392.

Energy methods
Elastic Stability of Composite Column, Yaxin Li, EM
Nov. 92, p2320-2327.

Mutual Residual Energy Method for Parameter Estima-tion in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, ST Jan. 92, p223-242.

Energy recovery systems
Editor's Preface, Richard J. Seymour, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), pl-3.

1992), p1-3.
Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992, 0-87262-894-9, 313pp.
The State of the Art in Tidal Power Recovery, J. Gavin Warnock and Robert H. Clark, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p4-33.

p4-53.

Energy sources

Lunar-Based System to Supply Power to Earth: Summary of Concept, Benefits, and Development, David R. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2392-2399.

Novel Combined-Cycle Low-Temperature Engine System, Joel H. Rosenblatt, EY Dec. 92, p209-223.

Ocan Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992, 0-87262-894-9, 313pp.

Energy storage New Technology Applicable to Tidal Power, G. C. Baker, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p42-69.

Energy transfer

Energy Transier
Facilitating Technology for Fuel Production and EnergyEnhanced Products, Patrick Takahashi, Charles Kinoshita, Stephen Oney and Joseph Vadus, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour,
ed., 1992), p293-305.

ed., 1992), p293-305.

Engineering
An Agenda for AEC PDES Research, Jason P. Heroux,
Douglas J. Peters, William J. Rasdorf and John W.
Baugh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno,
ed. and Jeff R. Wright, ed., 1992), p376-385.

Engineering Aspects of Wetland Design, Donald F. Hayes
and Michael R. Palermo, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p344-349.

Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p25.

Existentialism, Engineering, and Liberal Arts, David A. Bella, El July 90, p309-321.

Bena, El July 90, p309-321.

Many Engineering Issues and Challenges Met in Development of Hong Kong, C. K. Chow, El Jan. 92, p60-70.

Neural Networks and their Applicability within Civil Engineering James H. Garrett, 1r., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1155-1162.

The Role of Engineering Geology in Slope and Embank-ment Stability Analysis, Richard W. Galster, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992).

p70-94.

So Much for the Dewey Decimal System, CE Mar. 92, p8.

User Interface for Pipe Network Program, Istvån Lippai, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1049-1054.

Users' Groups, Satinder P. S. Puri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1022-1030.

Engineering education
AAES Model Anticipates Degree Production, CE Oct. 92.

pos, 70.
Advanced Structures in Very Deep Water, Richard J. Seymour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952.
ASCE Awards \$38,000 in Study Grants to Civil Engineering Students, NE Oct. 92, p10.
ASCE Nashville Branch Involved in U.S. Science Fair,

ASCE Nasaville Branch Involved in U.S. Science Pair, CE Dec. 92, p76.

California State University, Fullerton Students Roar Back to Capture Top Chapter Prize; Four Others Earn Vice Presidents' Awards for Outstanding Activities, NE Oct. 92, p7.

CE Prof. Discovers How to be Very, Very Popular, NE Apr. 92, p4.

Apr. 92, p4.
Civil Engineering Capstone Design Course, Donald A. Andersen, El July 92, p279-283.
Civil Engineering Curriculum Computer Integration 1992, Robert M. Henry, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1226-1233.

Civil Engineering Education: Case Study Approach, Jef-frey S. Russell and Bob G. McCullouch, El Apr. 90, frey S. Ru p164-174.

ivil Engineering Education in Ecuador, Oswald Ren-don-Herrero and Joseph H. Sherrard, El Oct. 92, p415-419.

p415-419.

Civil Engineering Experience and Education, Semra Siber Uluatam, El Jan. 92, p71-76.

Composites for Offshore Applications: A Multidisciplinary Education Program for the Marine Industry, Diane S. Kukich, Vistasp M. Karbhari and John W. Gillespie, Ir., (Civil Engineering in the Oceans V, Robert I. Hudspeth, ed., 1992), p953-967.

Computing in Civil Engineering: Current Trends and Future Directions, Nelson C. Baker and Glenn J. Rix, El Apr. 92, p139-155.

Corrections (Itr.), CE Mar. 92, p40.

Corrections (itr.), CE Mar. 92, p40. Critical Issues for Engineering Managers, Delon Hampton, ME July 92, p235-242.

Curriculum for Future Civil Engineers: Practitioner's Viewpoint, Guy E. Jester, El Oct. 89, p357-362. Delineating Theory for GPS Surveying, Alfred Leick, SU May 92, p33-42.

May 74, p33-42.
A Department's Perspective on Computer Education, Rafael G. Quimpo and Joel I. Abrams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p73-80.
Proceedings Civil Engineer for the 21st Computer Proceedings.

Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163.

The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

fucating Engineers for the Future: Two Views, Richard H. McCuen and Andrew Olmstead, CE Feb. 92, p6,10.

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Environment for Educational Use of Professional Engineering Software, Richard Sause, John L. Wilson, Mark Tamaro and Brenda Wildrick, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1892), p214-221. Experience-Based Issues in Construction Education, Amarjit Singh, El Oct. 92, p388-402. From Toothpicks, a Strong Base for Engineering Careers, CE June 92, p82-83.

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p361-380. Future Resources for Engineering, Peggy A. Johnson, Jill D. Leasure and Estela S. Llinas, El Jan. 92, p30-37. Guidance for Engineering-Design-Class Lectures on Ethics, Richard H. McCuen, El July 90, p251-257. Hunt Scholarship Fund Nears Goal, CE June 92, p82. Instructional Modules for Tunnel Design and Construction, Charles W. Schwartz, Herbert H. Einstein and Guillermo F. Salzar, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-375.

p368-375.

Integrating the Undergraduate Engineering Curriculum, Alice M. Agogino and Anthony R. Ingraffea, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p356-363.

ITS-CONCRETE: A Functional Description, H. Gordon Thompson, II. and Nelson C. Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p222-228.

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ed., 1992), p222-228.

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Military Leaders and Civil Engineers—An Air Force Academy Challenge, J. L. Brickell, K. J. Knox, B. L. Miller and B. D. Bryant, El July 92, p240-249.

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MIT Wins Engineering Triple Crown, CE May 92, p8.

Multimedia in the Civil Engineering Classroom, Genome Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p245-252.

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y2, p13.
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 S. Fletcher and J. E. Flipse, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p370-380.
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Marsa, El Jan. 90, p36-60.

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1992), po5-72.
1992), po5-72.
Real-Time Integrated Computer-Aided Instruction, Jorge A. Vanegas, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p81-88.
Reflection in Problem Solving and Design, C. J. Khisty and L. L. Khisty, El July 92, p23-4239.

Session Summary—Risk and Reliability of Water Resources Infrastructure, Dan Taylor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p350-354.

Shell/Toolkit for Multimedia Educational Applications, Boyd C. Paulson, Jr., Mohan Manavazhi, Hossam El-Bibany and Rafay Khan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p348-355.

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Strategies to Stem Declining Engineering Enrollments, Jack D. Bakos, Jr., El July 92, p250-257.

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Upgrading the First Professional Degree, Louis L. Guy, Jr., El Oct. 92, p345-348. 
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Use of Multimedia in a Sophomore Design Course, Mark L. Valenzuela, Gregory G. Deierlein and Richard N. White, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p229-236. 
Using Simulation Software to Build Conceptual Models in Civil Engineering, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244. 
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Why Four Years? Howard I. Epstein, El Apr. 91, p150-154.

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Eagineering firms

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CEs Heip Rebuild Los Angeles, CE Aug. 92, p8.

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Strategic Planning for Technology Development, Eitan S. Agai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1036-1041.
Surplus Promotes Price Competition, Tore O. Arnesen, CE Dec. 92, p6.

Using Computers to Competitive Advantage: Philosophy and Example, Philip C. Terry, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1105-1112.

1992), p1103-1112.

Engiasering geology
A Geologist's Perspective on Dam Foundation Grouting,
Kenneth D. Weaver, Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O. Holtz,
ed. and Ilan Juran, ed., 1992), p639-650.
Geotechnical Database Manipulation to Effect Stochastic
Analysis, James M. Keane, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p224-227.

Engineering mechanics

Complementary Potentials of Finite Elasticity, Gerald Wempner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p506-509.

Contact Induced Damage, Leon M. Keer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p502-505. Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp. Finite/Macroelement Meshes in Neural Rat Growth, Mona E. McAlarney, Letty Moss-Salentijn, Melvin L. Moss and Manjit Basra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p960-963. Form Comparison Without Anatomical Landmarks, Gautam Dasgupta, Mona E. McAlarney, Colin Goodall, Letty Moss-Salentijn and Melvin L. Moss, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975.

Wavelet Transform Analysis of Several Transient or Nonaveter Transient of Noveran Transient of Noveran Transient of Noveran Stationary Phenomena in Engineering Mechanics, James T. Kirby, Michael J. Chajes and Jeffrey A. Melby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p204-207.

Englaseering profession
A/E Compensation Levels Stay Flat as Vestiges of Recession Linger On, NE July 92, p15.
ASCE President Prizes Professionalism in Pursuit of Engineering Goals, CE Feb. 92, p70.
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Coastal Engineering—The Past!, The Present!, The Fu-ture? Omar J. Lillevang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1-11. Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. '91, p163-175.

Engineering societies
ABET Seeks Deputy, CE Aug. 92, p68.
ASME Pressure Vessel Code Application to Nuclear
Waste Container Design, Mohamed B. Trabia and
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William E. Norris, El Jan. 90, p.38-41.
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Electronic Spreadsheets in Structural Design, David O. Knuttunen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1187-

Ethical, Legal and Professional Responsibilities of Engineers to Owners and Contractors, Lawrence I. Erdos, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p989-1002.

Introduction to Ownership and Transition. I: Ownership Transfer Considerations, Robert E. Olden, ME Oct. 92,

Is It Good Business to Be a Citizen Engineer? Brent A. Campbell, CE Oct. 91, p54-55.

Issues in Human Resources: Managing Talent in the 21st Century, Linda Allen and Joseph Sewards, ME Oct. 92, p340-345.

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Nov. 90, pl 317-1328.
A Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, M. L. Spaulding, K. Jayko, T. Isaji, E. L. Anderson, E. Howiett, J. C. Swanson, D. Mendelsohn and S. Puckett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 70-175.
Note on Lag in Bedload Discharge, Subhash C. Jain, HY June 92, p904-917.
Problems in Hydrothermal Analysis. John Eric Edineer

Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, (Hydraulic Engineering: Sa-ning a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p164-169.

Entropy-Based Redundancy Measures in Water-Distribution Networks, Kofi Awumah, Ian Goulter and Suresh K. Bhatt, HY May 91, p595-614.
Reliability Analysis of Plates with Initial Deflection by Entropy Model, Miyamura Atsunori, Kohama Yoshiro and Takada Toyofumi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, V. K. Lin, ed., 1992), p559-562.

1992, p.339-302.
Variation of Velocity Distribution along Nonuniform Open-Channel Flow, Chao-Lin Chiu and David W. Murray, HY July 92, p989-1001.

Environmental compatibility Effective Airport Environs Planning in the 1990s, Kristi McKenney, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p25-

Green Architecture: Designing an Ecologically Sound Dwelling, Reinhard Kanuka-Fuchs, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

in the Iwenty-Ital Century, pi-10. Minneapolis/St. Paul International (MSP) Part 150 Im-plementation Design Overview, Steven J. Vecchi, (In-ternational Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p32-40.

Auport, Robert E. Boyer, ed., 1992), p32-40.

Environmental effects
Cloud Seeding: The Engineering is Done, but What About Social Impacts? Maurice Roos, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p565-570.

Environmental Effects of Beaufort Sea Causeways, J. M. Colonell, B. J. Gallaway and A. W. Niedoroda, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974.

p958-974.
Implementation of Material Requirements in Specifications, Harvey C. Beckham and John R. Smith, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p428-433.
Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.
Lunar Surface Mining Equipment Study, Egons R. Podnieks and John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1104-1115.
Medical Care on the Moon, Ron Schaefer. (Engineerine

Medical Care on the Moon, Ron Schaefer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1728-1737.

Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1728-1737.

Mitigation of Adverse Environmental Effects on Lunar-Based Astronomical Instruments, Charles L. Johnson, Kurtis L. Dietz, T. W. Armstrong and B. L. Colborn, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-1841.

Moisture and Suction in Sanitary Landfills in Semiarid Areas, G. E. Blight, J. M. Ball and J. J. Blight, EE Nov./Dec. 92, p865-877.

The Potential Fate of Particulate Contaminants from the Rehabilistated Ranger Uranium Mine, S. J. Riley and P. W. Waggitt, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamour, ed., 1992), p884-889.

Predicting Fate and Effects of Hydrocarbons in the Oceans, Richard A. Geyer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p356-369.

A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahsb, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p131-61.

Space Habitat Contaminant Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1370-1378.

Technology—Rey to Environmental Success, Paul Soros, (Ports '92, David Torseth, ed., 1992), p1392-202.

Environmental engineering
ASCE's Deason is Federal Engineer of the Year for 1992,
NE Apr. 92, p16.
Canada's Green Plan: Unique Approach to Preserving
Environment, Thomas J. Selinger, El Oct. 92, p349-

Capturing Capital, Paul J. Zofnass, CE May 92, p67-69.

Defensive Engineering Can Be Dangerous, Nicholas Al-bergo, CE Oct. 92, p6.

Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, 0-87262-878-7, 685pp.

Environmental Monitoring Plan for a Pilot Study Using Phosphogypsum as a Roadbed Material, Reid Lea, Adam Faschan and Marty Tittlebaum, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p128-139.

Environmental Projects Garner Academy's Awards, CE July 92, p27.

Future Concerns in Environmental Engineering Graduate Education, Richard G. Luthy, David A. Bella, James R. Hunt, James H. Johnson, Desmond F. Lawler, Charles R. O'Melia and Frederick G. Pohland, El Oct. 92, p361-380.

Just Call Them Superfund-Busters, CE Sept. 92, p11.

Recession Brings Maturity to Environmental Market, CE Dec. 92, p27.

The Role of Soil Modification in Environmental Engineering Applications, James K. Mitchell and Wade A. Van Court, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p110-143.

Start-Ups, CE Jan. 92, p11.

Versatile Data Managing, Amin Rahman, CC June 92,

# **Environmental factors**

Advanced Structures in Very Deep Water, Richard J. Seymour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952.

Application of Decision Support Systems (DSS) to the Management of Radioactive Wastes, René F. Reitsma and Jacquelyn F. Sullivan, (High Level Radioactive Waste Management, High Level Rut.: Level Waste Management Program Committee, 1992), p469-474.

Closed Cycle Ocean Thermal Energy Conversion, F. A. Johnson, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), Pol-108.

Design and Construction Considerations for Lunar Outpost, H. Benaroya and M. Ettouney, AS July 92, p261-273.

Development of a Water Conservation Program for the Spring Valley Water Company, Frank Gradilone, III., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p754-759.

Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992),

Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Mohammed N. Chang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p975-988.

Framework for Evaluation of Lunar Base Structural Con-cepts, Haym Benaroya and Mohammed Ettouney, AS Apr. 92, p187-198.

Geotechnology: An Environment of Change, Jean-Yves Perez, CE Dec. 91, p44-45.

Keeping the Public in Public Works Facility Planning, Margaret B. Umphres, Flisa Stevenson, Sara M. Katz and Robin Spear, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p238-243.

Laboratory Testing of Stone for Rubble Mound Break-waters: An Evaluation, David A. Lienhart, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p19-33.

Massive Energy Bill Advances, Casey Dinges, CE Aug. 92,

Metro Nearing Completion of Prototype Tunnel, CE Jan. 92, p14,16. Mobile Pilot Plant to Reuse Fly Ash in Concrete, CE Oct.

92, p18-19. No Need to Sell When the Kids Move Away, CE Apr. 92,

Overview of Existing Lunar Base Structural Concepts, Task Committee on Lunar Base Structures, AS Apr. 92, p159-174.

A PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Eoin Howlett and Daniel L. Mendelsohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500.

Pipe Runs from Prison, Welcomed by Town, CE May 92, p98.

p. Prediction of Sedimentgraph from a Small Watershed in Poland in a Changing Environment, K. Banasik and D. E. Woodward, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p493-498.

A Proposed Revised State Zoning Enabling Act, George W. Liebmann, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p91-100.

Regolith Dynamics, Mohammed M. Ettouney and Haym Benaroya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1379-1388.

Risky Business: Can We Believe Port Risk Assessments? John R. Harrald, Thomas A. Mazzuchi and Christopher M. Stone, (Forts '92, David Torseth, ed., 1992), p657-669.

Space Habitat Environmental Health: A Systems Issue,

Jones Habitat Environmental Health: A Systems Issue, Jon R. Schulz and Ralph N. Eberhardt, [Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2023-2034.

1992), p.2023-2034.
Stability Evaluation of Waste Landfills, Richard A. Mitchell and James K. Mitchell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.1152-1187.
U.S. Lead Recycling Plant Uses Italian Technology, CE June 92, p.27-28.
Water Management: Challenge and Chapter William

Water Management: Challenge and Opportunity, Warren Viessman, Jr., WR Mar./Apr. 90, p155-169. Wildlife, Water Shortage Affect Airport Project, CE Feb.

92, p24.

92, p.24.

Environmental impact statements

City and County of Denver Approach to Management Requirements, Ginger S. Evans, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p164-169.

Contracting and Legal Issues, Robert A. Rubin and Jeannette L. Molina, (Excavation and Support for the Urban Influstracture, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p6-25.

Environmental Impact Analysis of Coastal Projects, Jon

man, ed., 1992), p6-25. Environmental Impact Analysis of Coastal Projects, Jon T. Moore, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p952-957. Ontario Hydro Used Fuel Transportation Assessment, L. Grondin, D. Ribbans and S. Naqvi, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1209-1215.

p1209-1215.

Eaviroamestal impacts
Application of a Probabilistic System-Model Based Methodology for the Performance Assessment of Deep Underground Disposal of Nuclear Wastes, T. J. Sumerling and B. G. J. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1647-1657.

An Assessment of Environmental Costs Associated with Crude Oil Pipeline Damage Caused by Earthquakes, Ronald T. Eguchi, Susan D. Pelmulder and Hope A. Seligson, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p153-167.

The Changing Alliance Between Navigational and Envi-

p153-107.
The Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), a407.417. p407-412

Contaminant Groundwater Interception—RMA, S. Paul Miller and William L. Murphy, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1171-1176.

ed., 1992), p1171-1176. Contracting and Legal Issues, Robert A. Rubin and Jean-nette L. Molina, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p6-25. Creating Wetlands, Laurence J. Purcell and Thomas D. Johnson, CE Aug. 92, p36-37.

The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48.

Decision Management for the Hanford Environmental Dose Reconstruction Project, William J. Roberds, H. A. (Walt) Haerer and Detlof von Winterfeldt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1743-1750.

1992), p1743-1750.

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, James D. Bowen, Steven H. Wolf and Curtis A. Meininger, (Ports '92, David Torseth, ed., 1992), p443-455.

Engineering Answers to Groundwater Impact Questions Using a Geographic Information System (GIS), Paul E. Albertson and Albert N. Williamson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p505-510.

Environmental Ameniites and the Location of Industrial Activity, Tim Allison and Frank Calzonetti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Frogram Committee, 1992), p587-592.

Environmental Aspects of Lunar Helium-3 Mining, G. L.

atoactive waste Management Program Committee, 1992), p587-592.
Environmental Aspects of Lunar Heitium-3 Mining, G. L. Kulcinski, E. N. Cameron, W. D. Carrier, III. and H. H. (Jack) Schmitt, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p606-616.
Environmental Impacts of Agricultural Drainage, R. W. Skaggs, M. A. Breve and J. W. Gilliam, (Irrigation and Drainage: Saring a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p19-24.
Environmental Management Issues in Developing Countries of Southeast Asia, Au-Yeung Yin, (Water Resource et Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p631-635.
Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, K. J. Riggle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p53223-2330.

p2323-2330.

Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Maicolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

The Evolution of an Environmental Monitor, Peter J. Dodds and R. Scott Sternberger, CE June 92, p56-58.

Evolution Mitization Requirements for Port Develop-

Evolving Mitigation Requirements for Port Development, William K. Fehring, Mark Easley and David C. Carpenter, (Ports '92, David Torseth, ed., 1992), p203-

The Greening of Greens, R. Todd Borden, CE Oct. 92, p55-57.

highway Construction and a Trout Stream Relocation, James Seksinsky, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p413-419

Impact of Breakwater Removal on Hydrodynamics and Water Quality in Flushing Bay, New York, Frederick E. Schuepfer, Guy A. Apicella and Les Kloman, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p694-706.
An Integrated Approach to Highway Design and Environmental Impact Analysis Using GIS and CADD, William i. Galbraith, Joseph G. Anthony and Anne Sulivan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p161-167.
Minimizing the Risk and Impact of Tanker Accidents, C. S. Birt and A. J. Jordan, (Ports '92, David Torseth, ed., 1992), p670-681.

1992), p6/0-681.
Model for Estimating Tidal Flushing of Small Embayments, Lawrence P. Sanford, William C. Boicourt and Stephen R. Rives, WW Nov./Dec. 92, p635-654.
Model for Prescribing Ground-Water Use Permits, James W. Male and Frederick A. Mueller, WR Sept./Oct. 92, p635-654.

p543-561

Modeling Dredged Material Disposed in Open Water, B. H. Johnson, D. N. McComas and D. C. McVan, (Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1036-1041.

A Multi-objective Criteria Analysis for Alternative Route Planning, Amy Zlotsky, Michael P. Gutzmer and Guy M. Evasco, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p474-479. Municipal Wastewater for Power Plant Cooling Water. Impacts on a Flow-Limited River, Mark Gerath, Fed Sellars, Monique Villars and Lisa Wolf, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p122-127.

On-Orbit Chipless Cutting and Tube Welding in Space Station Freedom, William R. Wessels, Mitchell D. Mulder and Brace B. Daniel, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p815-

826.

Overview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Renberry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204.

Piles Over Problems Sites, Issa S. Oweis and Edward M. Zamiskie, Jr., CE Apr. 92, p62-64.

Pine Creek Tidal Hydraulic Study, James G. MacBroom and Edward Hart, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1154-1158.

Jennings, e p1154-1158

Probabilistic Environmental Risk of Hazardous Materials, Timothy L. Jacobs and P. Aarne Vesilind, EE Nov./Dec. 92, p878-889.

QSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, N. H. Tang, D. J. W. Blum, R. E. Speece and N. Nirmalakhandan, EE Jan./Feb. 92, p17-37.

and N. Nirmalakhandan, EE Jan./Feb. 92, p17-37.
Radiological Environmental Monitoring for the Yucca
Mountain Site, K. J. Shenk, J. K. Prince and C. D.
Sorensen, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p2313-2317.
Recycling Wastewater by Drip Irrigation, Win Bui, (Irrigation and Drainage: Saving a Threatened Resource—
In Search of Solutions, Ted Engman, ed., 1992), p437444

Task Committee on Sediment Transport and Aquatic Habitats, Sedimentation Committee, HY May 92, p669-687.

p669-687.
The Socio-Economic Impact Assessment for Nuclear Fuel Waste Disposal—Meeting the Challenges of the Canadian Environmental Review Process, J. Tamm and T. Wlodarczyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1777-1785.
The Status of Yucca Mountain Site Characterization Activities, Carl P. Gertz, (High Level Radioactive Waste Management Program Committee, 1992), p748-750.
Taking Account of the Biosphere in HLW Assessment, Graham M. Smith and Helen A. Grogan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p2306-2312.

Environmental issues

Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, 0-87262-866-3, 1100pp.

Dealing with Uncertainty: From Health-Risk Assessment to Environmental Decision Making, Anthony L. Cox, Jr. and Paolo F. Ricci, EY Aug. 92, p77-94.

The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48.

Braft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Torseth, ed., 1992), p539-1000.

Ecological Sustainable Development—A Place in the Sun for Nuclear Energy? Carole Palmer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1470-1477.

The Engineer's Role in Sustainable Development. V. Ra-

The Engineer's Role in Sustainable Development, V. Ra-jagopalan, CE Aug. 92, p6. The Environment is Good Business in France, Virginia Fairweather, CE Mar. 92, p66-68.

Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, 0-87262-878-7, 685pp.

ed., 1992, 0-87262-878-7, 685pp.
Environmental Management Issues in Developing Countries of Southeast Asia, Au-Yeung Yin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p631-635.
Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, 0-87262-861-2, 798pp.

Evaluation of the Model Water Code from an Environ-mental Ethic Perspective, Margot W. Garcia, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p231-236.

Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

Excavations and Contamination, Bryan P. Sweeney and Joel S. Mooney, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p26-45.

From Sludge to Brokered Biosolids, Teresa Austin, CE Aug. 92, p32-35.

Future Trends and Needs in Hydraulics, Daryl B. Simons, HY Dec. 92, p1607-1620.

Geotechnology: An Environment of Change, Jean-Yves Perez, CE Dec. 91, p44-45. The Greening of Greens, R. Todd Borden, CE Oct. 92, p55-57.

In Too Deep, Robert A. Rubin and Jeannette L. Molina, CE Dec. 92, p67-69.

International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992, 0-87262-871-X, 284pp.

Irrigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992, 0-87262-877-9, 634pp.

Lessons Learned from Elk Creek Dam, Dennis R. Hop-man, (Roller Compacted Concrete III, Kenneth D. Han-sen, ed. and Francis G. McLean, ed., 1992), p162-180.

Limehouse Link Tunnel Project—London—A Case His-tory, Patrick McCreight, David Scott and George Tamaro, (Excavation and Support for the Urban Infra-structure, T. D. O'Rourke, ed. and A. G. Hobelman, structure, T. D. C. ed., 1992), p65-90.

ed., 1972), po.>90.

Major Public Transportation Investments as "Development Projects": Old Colony Railroad, Mary P. McShane, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), pl 38-142.

Managing Existing Reservoirs to Meet New Challenges, Morris Israel and Jay R. Lund, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p673-678.

Consideration of Ecology and Environment, E. Ritterbach, M. Schröder and G. Rouvé, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1142-1147.

Overview of Design and Construction in the Urban Envi-ronment, Thomas R. Kuesel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), pl-5.

Pilot Waste-Stabilization Pond in Tanzania, Michael Yhdego, EE Mar./Apr. 92, p286-296.

Pipe Plunge Pool Energy Dissipator, Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323.

Ports '92, 2 vols., David Torseth, ed., 1992, 0-87262-874-4, 1212pp.

The Proposed Waste Management Plan for Dairy Farm Wastes Polluting the Tangipahoa River and Lake Pontchartrain, Gianna M. Jones, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p656-661.

Reassessing the Risk Assessment, Wayne K. Tusa, CE Mar. 92, p46-48. Regarding Nature as Raw or Cooked, Margaret N. Max-ey, CE Oct. 91, p61-63.

Sensitivity of Flow and Salt Transport to Uncertainties at Open Boundaries: A 3-D Experience, Bernard B. Hsieh and Billy H. Johnson, (Estuarine and Coastal Model-ing, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p720-732.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed.,

1992), p511-516.

1992), p511-516.
Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chilcote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p1-14.
The Talbert Channel Ocean Outlet Project, Craig B. Leidersdorf, Kenneth E. Smith and Ruh-Ming Li, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p745-761.
Texas High-Speed Rail Inches Along, CE May 92, p20.

Environmental mapping
Timely Technology: GIS Use in the U.S., CC Nov. 92, p12-13.

Environmental planning
The Challenge of Kissimmee River Restoration, Stuart J.
Appelbaum, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p696-701.
Effective Airport Environs Planning in the 1990s, Kristi
McKenney, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p25-

31.
Engineers Form Partnership to Pursue Global Initiatives, CE May 92, p81-82.
An Event Size Probability Distribution for Risk Analysis, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p232-237.
We Need to Integrate Water Transportation and Environmental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p403-406.

Environmental Protection Agency ASCE Backs Revised Wetlands Manual From EPA, NE Jan. 92, p2.

Jan. 92, p2.

ASCE Policy Group Counsels EPA on Coastal Pollution, CE Mar. 92, p76-77.

Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, Raymond M. Wright, Igor Runge, Rajat Roy Chaudhury and Daniel W. Urish, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467.

Critical Public Issues for Well Head Protection, Daniel J. Van Abs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p274-279.

Dinner Presentation, Robert D. Brenner, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p1-6.

p1-6.

EPA Responds to Report Saying its Research is Inadequate, NE Apr. 92, p5.

Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 191 to Other Wastes, Neil J. Numark and Suzanne R. Phelps, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1074-1081.

FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarreta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p940-945.

Hot Line Opens for Entrepeneurs, CE May 92, p8.

1992), p940-945.

Hot Line Opens for Entrepeneurs, CE May 92, p8.

Hot Line Opens for Entrepeneurs, CE May 92, p8.

Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area, Jill C.

Bicknell and Sachiko Itagaki, (Water Resource: Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), p451-456.

An Inside Look at the 40 CFR 191 Containment Requirements, Floyd L. Galpin, Raymond L. Clark and Caroline Petti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1047-1054.

Municipal Field Screening Analyses, Gene N. Rattan and John L. McDaniel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p50-55.

Pollution Control Under the NPDES Stormwater Program, Thomas S. George and June Barrett-McDaniels, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645.

Storm-Water Permits: Trickle Becomes Torrent, Jeffrey Beard, CE Nov. 92, p112.

Beard, C. F. Nov. 92, p. 112.
USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, R. Brad Jennings, Tim H. Raines and Lucia G. Colangione, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p56-61.

Environmental quality
Baltimore Waste Water Infrastructure a Health Plan,
George G. Balog, Gary A. Wyatt and Edward Serp, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p429-432.

Canada's Green Plan: Unique Approach to Preserving Environment, Thomas J. Selinger, El Oct. 92, p349-

Electroosomotic Removal of Gasoline Hydrocarbons and TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, 0-87262-878-7, 685pp.

The Evolution of an Environmental Monitor, Peter J. Dodds and R. Scott Sternberger, CE June 92, p56-58.

Green Architecture: Designing an Ecologically Sound Dwelling, Reinhard Kanuka-Fuchs, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p1-10.

Identifying the Critical Path and Building Coalitions for Restoring Degraded Areas of the Great Lakes, J. H. Hartig, D. P. Dodge, L. Lovett-Doust and K. Fuller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p823-830.

Pilot Waste-Stabilization Pond in Tanzania, Michael Yhdego, EE Mar./Apr. 92, p286-296.

A Real Hands-On Cleanup, CE Aug. 92, p8.

Reassessing the Risk Assessment, Wayne K. Tusa, CE Mar. 92, p46-48.

Regarding Nature as Raw or Cooked, Margaret N. Max-ey, CE Oct. 91, p61-63.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p511-516.

Environmental quality regulations

Land Development Regulations: Roadblock to Affordable Housing, Thomas J. Olenik and S. L. Cheng, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p39-47. Proposed EPA Regulations Worry Marina Industry, CE Feb. 92, p27.

otal research

Hydraulic Structures Versus Zebra Mussels, John J. In-gram and Andrew C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611.

Researchers Search for Pearls of Wisdom, CE May 92, p8. Taming Environmental Data, Neno Dupiancic and Greg-ory Buckle, CE Aug. 92, p56-58.

**Environmental surveys** 

Bootstrapping Models Using Existing Databases and Ob-ject Orientation, Rene F. Reitsma and David Sieh, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p598-605.

Environmental Monitoring and Operator Guidance System (EMOGS) for Shallow Water Ports, Andrew L. Silver, (Ports '92, David Torseth, ed., 1992), p535-547.

Geographical Information System (GIS) Technology in Global Environmental Evaluation—An Overview, Robert C. Lozar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2104-2127.

Monitoring of the 1988 Boca Raton Beach Nourishment Project, Richard H. Spadoni, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p120-136.

'Odd Couple' Techniques Aid Site Assessment, CE May 92, p22,26.

Preclosure Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. Johansen, L. Grondin and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p481-488.

Epoxy adhesives
Epoxy Helps Builders Adhere to Schedule, CE Mar. 92, p88.

Epoxy coatings Fifth Time Around, as California Pier Reappears, CE July 92, p12. Hybrid (FRP+Steel) Reinforcement for Concrete Struc-

tures, Antonio Nanni, Tadashi Okamoto, Massharu Tanigaki and Markus J. Henneke, (Materialis: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992; p655-665. Performance of Epoxy-Coated Steel in Continuously Re-

commance of Epoxy-Coated Steel in Continuously Re-inforced Concrete Pavement, Farrel J. Zwerneman, Rex C. Donahey, Hameed S. Syed and Srinivas R. Gunna, (Materials: Performance and Prevention of De-ficiencies and Failures, Thomas D. White, ed., 1992), p339-352.

Trial Nearing in Controversial Epoxy-Coated Rebar Case, CE Aug. 92, p12-13.

Epoxy compounds

Evaluation of Partial Depth Spall Repair Materials and

Procedures, Arti J. Patel, David G. Peshkin and A.

Russell Romine, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White,
ed., 1992), p748-799.

Epoxy resins
Behavior of Concrete-Graphite/Epoxy Sections in Composite Bridge Girders, F. Gordaninejad, M. Saiidi and N. Wehbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709.

1992, po96-109.

Comparison of Micromechanical Models for Elastic Properties, Cliff J. Lissenden and Carl T. Herakovich, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 309-1322.

Estiman Resistance of Large Diameter Cable for Cable.

Fatigue Resistance of Large-Diameter Cable for Cable-Stayed Bridges, Koei Takena, Chitoshi Miki, Hirosuke Shimokawa and Kenji Sakamoto, ST Mar. 92, p701-

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski Brown, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992),

sexural and Shear Studies of Carbon Fiber Reinforced Beams, Paul Zia, Shuaib H. Ahmad, Rakesh K. Garg and Kristina Hanes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p984-

987.
Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou, Nikolaos Plevris and Nikolao Deskovic, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717.
Premature Failure of Externally Plated Reinforced Concrete Beams, Deric John Oehlers and John Paul Moran, ST Apr. 90, p978-995.

ST Apr. 90, p978-995.

Equations of motion
Comparative Survey of Four Unsaturated Soil Flow
Equations, Abbas A. Fiuzat and David W. Moughton,
HY May 92, p786-791.

Dynamic Behavior of Nonlinear Cable System. I, S.
Messarovic and D. A. Gasparini, EM May 92, p899-98.

Fully Coupled Unsteady Mobile Boundary Flow Model
(FCM), Luís R.P. Correia, Bommanna G. Krishnappan
and Walter H. Graf, HY Mar. 92, p476-494.

Modal Coupling Effect of Non-Classically Damping, K.
Xu and T. Igusa, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p453456.

Tripod Crane Concept for Lunar Surface Construction, Haruyuki Namba and Martin M. Mikulas, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295. Wave Propagation in a Nonlocal Strain-Softening Continuum, Gilles Pijaudier-Cabot and Antonio Huerta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p620-623.

Equilibrium

Qualitative Evaluation of Preliminary Structural Designs,
Luis M. Bozzo and Gregory L. Fenves, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p89-96.

Statically Determinate Trusses Programmed in Logic, Vlasis K. Koumousis and Panos G. Georgiou, CP Oct. 92, p435-455.

Equilibrium equations
On the Diffusional Stress Transmission, Włodzimierz
Brząkała, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p175-178.

Equilibrium profile
Experience with Beach Fill Equilibration and Recommended Design Guidelines, Erik J. Olsen, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),

ediction of Storm/Normal Beach Profiles, Robert A. Dalrymple, WW Mar./Apr. 92, p193-200.

quillbrium state 4athematical Model for Piping, M. A. Koenders and J. B. Sellmeijer, GT June 92, p943-946.

B. Sellmeijer, GI June 72, p.75.

Equipment
Advances in Ground Operations for the Next Generation
Space Launch Vehicle Programs, Mark Moeller and
Shelly Ewing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p1557-1566.

Application of Neural Networks in Earthmoving Equipment Production Estimating, Saeed Karshenas and Xin
Feng, (Computing in Civil Engineering and Geographic
Information Systems Symposium, Barry J. Goodno, ed.
and Jeff R. Wright, ed., 1992), p841-847.
Automating The Corps, James Denning, CE Apr. 92,
p65-67.

p65-67.

Characterization of Emplacement Strategies for Lunar and Mars Missions, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1631-1644.

Contact Induced Damage, Leon M. Keer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p502-505.

Electronic Theodolites: Comparison Test, Abdalla Elsadig Ali, SU Feb. 91, p3-8.

Expert System for Equipment Selection for Earth-Moving

Electronic Theodolites: Comparison Test, Abdalla Elsadig Ali, SU Feb. 91, 93-8.

Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

Lunar He-3 Mining: Improvements on the Design of the UW Mark II Lunar Miner, Igor N. Sviatoslavsky, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1080-1091.

Lunar Surface Mining Equipment Study, Egons R. Podnieks and John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1104-1115.

Mitigation of Dust Contamination During EVA Operations on the Moon and Mars, Peter E. Glaser, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1512-1522.

Multiple Booster Spaceports, Alan W. Arata, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2033-2043.

Planning and Budgeting for FAA Facilities and Equipment, Lames D. Rishon, (International Air Transported).

1992), p2035-2043.
Planning and Budgeting for FAA Facilities and Equipment, James D. Bishop, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p239-243.
Power Sources for Lunar Bases, Alastair J. W. Mayer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p763-773.

Principles of Control for Robotic Escavation, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1401-1412.

Rapid Water Content by Computer-Controlled Microwave Drying, Paul A. Gilbert, CT Jan. 91, p118-138.

Robotics in SEI Terrestrial Launch Site Operations, Briss. S. Yamanoto, A. J. Mauceri and O. A. Chaikovsky, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1464-1474.

Safety and Service Life of Equipment Designed for Cold Climate Operation, V. P. Larionov, CR Sept. 92, p111-123.

p111-123.

p111-123.
site Investigation Equipment Developed by Teollisauden Voima Oy, Henry Ahokas, Antti Öhberg, Heikki Hinkkanen and Pekka Rouhiainen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1092-1098. Stochastic Response of a Caster-Mounted System, Michael A. Moser and Wilfred D. Iwan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), n316-319.

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), p316-319.
Transfer of Terrestrial Technology for Lunar Mining, Robert A. Hall and Patricia A. Green, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1150-1161.
Two Evamelac of Parising Processing Stein Stein

wo Examples of Position Estimation, Gary Shaffer and Ben Motazed, (Computing in Civil Engineering and Gographic Information Systems Symposium, Barry Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

Equivalent Kostiakov Parameters for SCS Infiltration Families, Subramania Iyer Sritharan, IR Jan./Feb. 92, p192-197.

Erosion
57 Years of Coastal Engineering Practice at a Problem Inlet: Indian River Inlet, Delaware, Jeffrey A. Gebert, Keith D. Watson and Augustus T. Rambo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p503-519.

Bed-Load Coefficients, Raul Pacheco-Ceballos, HY Oct. 92, p1436-1442.

Bed-Load Coefficients, Raul Pacheco-Ceballos, HY Oct. 92, p1436-1442.
Beginning of Motion for Selected Unanchored Residue Materials, John E. Gilley and Eugene R. Kottwitz, IR July/Aug. 92, p619-630.
Bridge Pier Scour with Debris Accumulation, Bruce W. Melville and D. M. Dongol, HY Sept. 92, p1306-1310.
Controlling Mechanism of Local Scouring, Bijan Dargahi, HY Oct. 90, p1197-1214.
Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p533-554.
Darcy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, IR Jan./Feb. 92, p104-112.
Effect of Spoilers on Scour at Submarine Pipelines, Yee-Meng Chiew, HY Sept. 92, p1311-1317.
Effects of Sea-Level Rise on Bays and Estuaries, ASCE Task Committee on Sea-Level Rise and Its Effects on Bays and Estuaries, HY Jan. 92, p1-10.
Erosion of a Thin Lutocline Under Homogeneous Turbulence, Panagiotis D. Scarlatos, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p263-268. 1992), p263-268.

1992), p263-268.
Evaluation of Erosion Potential at Pipeline Crossings, David T. Williams, Samuel Carreon, Jr. and Jeffrey B. Bradley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694.
Hydroturbine Cavitation Erosion, J. L. Gordon, EY Dec.

92, p194-208.

Hyperconcentrated Sand-Water Mixture Flows over Ero-dible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1525

Identification and Nature of Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan and Rey S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander

Singh, ed., 1992), p285-300. cipient Motion during Static Armoring, Anders Wörman, HY Mar. 92, p496-501.

Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227.

Local Scour at Bridge Abutments, B. W. Melville, HY Apr. 92, p615-631.

Overtopping Protestics Vision B. W.

Apr. 92, pol.3-031.
Overtopping Protection Using Roller-Compacted Concrete, Harry E. Jackson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1216-1221.
Performance of an Enhancement Deep With Paris! Con.

200

1992), p1216-1221.

Performance of an Embankment Dam With Partial Cutoff, Pascual H. Perazzo and Tauseef I. Choudry, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1022-1032.

Pinhole Test for Identifying Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284.

Routing Debris Flows with Particle Segregation, Tamotsu Takahashi, Hajime Nakagawa, Tatsuo Harada and Yousuke Yamashiki, HY Nov. 92, p1490-1507.

Scour Around a Vertical Pile in Waves, B. Mutlu Sumer, Jørgen Fredsee and Niels Christiansen, WW Jan./Feb. 92, p15-31.

92, p15-31.

25, p13-51.
Sour Downstream of Grade-Control Structures, Noel E. Bormann and Pierre Y. Julien, HY May 91, p579-594.
Sour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-hsi Chu and Gilbert K. Nersesian, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.
Sour Protection at Bridge Piers, Yee-Meng Chiew, HY
Sept. 92, a1260-1260.

cour Protection at Bridge Piers, Yee-Meng Chiew, HY Sept. 92, pl 1260-1269.
eepage Influence on Stability of Bridge Abutments, D. J. Hagerty and A. C. Parola, (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

1992, p902-903.
Summary of Noncohesive Sediment Transport Processes at the Bed/Water Column Interface, David H. Schoellhamer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p375-200.

Variations in Curve Number for a Reclaimed AML Site, K. James Fornstrom and James L. Smith. (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p389-394.

Articulating Block Mat Revetment for Whaler's Village, Robert A. Nathan and David G. Cannon, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.268-284.

Beginning of Motion for Selected Unanchored Residue Materials, John E. Gilley and Eugene R. Kottwitz, IR July/Aug. 92, p619-630.

Biotechnical Stabilization of Cut & Fill Slopes, Donald H. Gray and Robbin B. Sotir, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1395-1410.

Chesapeake Bay Field Modeling and Monitoring Projects, Wesley E. Coleman, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p221-233.

Construction on Wisconsin's Lake Michigan Coast, J. Philip Keillor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p762-778.

Dams Going Safely over the Top, R. Lee Wooten, George R. Powledge and Stephen L. Whiteside, CE Jan. 92, p52-34.

p52-54.
Evaluation of Palmiter Erosion Remediation Techniques—A Case Study, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p660-665.
Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p139-144. 144

Gravel Equilibrium Beach Design for Arresting Shore Erosion at Flathead Lake, Montana, Steven L. Dot Costa, Joseph L. Scott and David P. Simpson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p154-169.

Hydrodynamic Forces and Evolution of a Nearshore Berm at South Padre Island, Texas, James A. Aidala, Neil T. McLellan and Cheryl E. Burke, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239.

Levels of Service Applied to Urban Streams, H. Rooney Malcom and Cynthia C. Lancaster, WR July/Aug. 91, p482-497.

An Overview of Segmented Offshore/Headland Breakwater Projects Constructed by the Buffalo District, Thomas Bender, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), pl 70-188.

Recyled Paper Controls Wisconsin Erosion, CE June 92, p95.

Scour Protection at Bridge Piers, Yee-Meng Chiew, HY Sept. 92, p1260-1269.

Sediment Management with Submerged Vanes. II: Appli-cations, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

### Error analysis

AASHTO Direct Structural Capacity Method Error Anal-ysis, Ronald L. Baus and Andrew M. Johnson, TE Jan./Feb. 92, p20-32.

Equivalent Linearization for Seismic Responses. I: For-mulation and Error Analysis, Young J. Park, EM Nov.

Human Error in Complex Systems, Douglas H. Harris, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1527-1533

The Human Side of Systems, Harold E. (Smoke) Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 534-1541.

Precision of Evapotranspiration Estimates Using Neu-tron Probe, Osmar A. Carrijo and Richard H. Cuenca, IR Nov./Dec. 92, p943-953.

IR NOV/IDEC. 92, p943-953.
Relationships Between Error Estimation and Adaptive Computations in Strain Localization, D. Aubry and B. Tie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283.
Robust Testing Procedure for Detection of Multiple Blunders, Y. Gao, E. J. Krakiwsky and J. Czompo, SU Feb. 92, p11-23.

Important Sources of Errors in Computational Hydraulics, Nosrat Maghsoudi and Daryl B. Simons, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p392-397.

Pre-Test Selection of Static Force and Displacement Measurement Locations for Damage Assessment, Masoud Sanayei, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p567-570.

Robust Testing Procedure for Detection of Multiple

Robust Testing Procedure for Detection of Multiple Blunders, Y. Gao, E. J. Krakiwsky and J. Czompo, SU Feb. 92, p11-23.

The Role of Benchmark Problems in Slope Stability Com-putations, Stephen G. Wright, (Stability and Perform-ance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1067-1069.

Sampling Errors in U. S. Extreme Wind Records, Jon A. Peterka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p280-

Study of Groundwater Availability in Case of Drought, Tiao J. Chang and Choo B. Teoh, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Source—In Search of Soi Karamouz, ed., 1992), p130-137.

Framework of a Knowledge-Based Estimate Classifica-tion System, Irrishad U. Ahmad and Syed T. Rahman, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p967-974.

Use of Importance Sampling Constraints in System Optimization, Yingwei Liu and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p112-115.

Estimating
Confidence Interval for Design Floods with Estimated
Skew Coefficient, Jahir Uddin Chowdhury and Jery R.
Stedinger, HY July 91, p811-831.
Stedinger, HY July 91, p811-831.

Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

and Dominic M. Di Toro, EE Sept./Oct. 91, po40-655. Estimating Peak Flows from Small Agricultural Water-sheds, James V. Bonta and A. Ramachandra Rao, IR Jan./Feb. 92, p122-137. Estimating Pil-Excavation Volume Using Cubic Spline Volume Formula, Chun-Sung Chen and Hung-Cheng Lin, SU May 91, p51-66.

Estimating the Consequences of Significant Fracture Flow at Yucca Mountain, John H. Gauthier, Michael L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e901-808 p891-898.

poor-598. Estimating Urban and Suburban Sewerage Flows with Assistance of GIS Technology, Paul Kirshen, Daniel Nvule and John Corliss, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p208-212.

p208-212. Estimating VOC Emission Rates in Aeration Systems, Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p73-78.

Heavy Construction Estimates, With and Without Computers, Jimmie C. Hicks, CO Sept. 92, p545-560.

Intersection Air Quality Analysis, John Zamurs, Robert Conway and Stephen S. Rosen, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p283-297.

p.833-291.
Modeling Guideline for Air Quality Analysis of Intersections, George J. Schewe, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.298-305.
Simple and Accurate Friction Loss Equation for Plastic Pipe, R. D. von Bernuth, IR Mar./Apr. 90, p.294-298.

23 De la Company de la Comp

1992), p250-256.

An Advanced First-Order Method for System Reliability, Sankaran Mahadevan and Thomas A. Cruse, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p847-490.

Application of Neural Networks in Earthmoving Equipment Production Estimating, Saeed Karshenas and Xim Feng, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p841-847.

Estimation of Chemical Grout Void Filling by Electrical Resistivity, Hideo Komine, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p372-383.

Geotechnical Database Manipulation to Effect Stochastic

Geotechnical Database Manipulation to Effect Stochastic Analysis, James M. Keane, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p224-227.

Low-Cycle Fatigue Prediction for Ramberg-Osgood Type Materials, Faisal H. Al-Sugair, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p432-435.

ed., 1992), p432-435.
Mutual Residual Energy Method for Parameter Estimation in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, ST Jan. 92, p223-242.
On a Procedure to Estimate the Reliability of Mechanical Components, G. I. Schuëller, C. G. Bucher and H. J. Pradiwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p451-454.
Operation of the Hanford Environmental Processing of the Hanford Environmental Processing Processing

ps31-434.
Overview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Ikenberry, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204.

Parameter Estimation in Complex Linear Structures, M. R. Banan, M. Banan and K. D. Hjelmstad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p571-574.

A Probabilistic Regional Damage Estimation Model for Earthquake Occurrences, Dimitris Rentzis, Anne Kiremidjian and Craig Howard, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24.

Procedures for Estimating Accident Reductions on Two-Lane Highways, Rahim F. Benekohal and Asma M. Hashmi, TE Jan./Feb. 92, p111-129.

Quantifying Uncertainty in Site Characterization, William J. Boyle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p216-219.

Recursive Parameter Estimation for ARMA Simulations, Bingqi Miao, EM Dec. 92, p2484-2490.

Review of Geostatistics in Geohydrology: I. Basic Con-cepts, ASCE Task Committee on Geostatistical Tech-niques in Geohydrology of the Ground Water Hydrolo-gy Committee of the ASCE Hydraulies Division, HY May 90, p612-632.

Sensitivity Evaluation of Simulation Methods for Relia-Sensitivity Evaluation of Simulation Methods for Reliability Assessment, Bilal M. Ayyub and Chao-Yi Chia, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p240-243.
A Statistical Method for the Reliability of Mechanical Components, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p440-442.

Study of Groundwater Availability in Case of Drought, Tiao J. Chang and Choo B. Teoh, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p130-137.

Truncation of Infinite Hierarchy for Hysteretic Systems, George Tsiatas and Sau-Lon James Hu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p416-419.

Two Examples of Position Estimation, Gary Shaffer and Ben Motazed, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887. Weather Advisor System for Construction Duration Estimation: Potential of Integrating KBS's and CD-ROM Databases, Diego Echeverry and Moonja P. Kim, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p833-840.

Assessing Cu(II) Speciation and Transport in the New York Bight, A. B. M. Badruzzaman and Wu-Seng Lung, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p476-488.

The Changing Alliance Between Navigational and Envi-ronmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412.

Control of Contaminant Transport in Estuaries, Nikolaos D. Katopodes, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p370-381.

Delaware Estuary Nonpoint Source Control Program, William Whipple, Jr. and Van Dyke Polhemus, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p718-723.

Design Procedures for Effluent Discharge to Estuaries During Ebb Tide, Tony Webb and Rodger B. Tomlinson, EE May/June 92, p338-362.

Effects of Sea-Level Rise on Bays and Estuaries, ASCE Task Committee on Sea-Level Rise and Its Effects on Bays and Estuaries, HY Jan. 92, p1-10.

Erosion of a Thin Lutocline Under Homogeneous Turbu-lence, Panagiotis D. Scarlatos, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p263-268.

Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, 0-87262-861-2, 798pp.

Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

Evaluation of Modelling Parameters for Simulation of Es-tuarial Systems, Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p707-719.

Swanson, ed., 1992, p. 101-112.
An Experimental Model Using a Graphical User Interface, David G. Kleinschmidt and Bryan R. Pearce, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.36-47.

Hydraulic Controls on Delaware Estuary Water Quality, Joseph L. DiLorenzo, Georgia R. Marino, Poshu Huang, Tavit O. Najarian and M. Llewellyn Thatcher, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p151-157.

and Nani G. Bhowmik, ed., 1992), p151-157.
The Importance of Density Driven Circulation in Well
Mixed Estuaries: The Tampa Bay Experience, Boris
Galperin, Alan F. Blumberg and Robert H. Weisberg,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p332-343.

Lagrangian Solution of St. Venant's Equations for Alluvial Estuary, Hubert H. G. Savenije, HY Aug. 92, p11531163.

Longitudinal Dispersio. Coefficients in Estuary, I. Guy-mer and J. R. West, HY May 92, p718-734.

Mesh Generation for Estuarine Flow Modeling, Norman L. Jones and David R. Richards, WW Nov./Dec. 92, p599-614.

Modeling the Pathways of Nonconservative Substances in Estuaries, Tamara M. Wood and António M. Baptista, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p280-291.

Corng, eu. and Craig Swanson, ed., 1992), p280-291.

Modeling Three-Dimensional Circulation and Sediment
Transport in Lakes and Estuaries, Y. Peter Sheng, D. E.
Eliason and X.-J. Chen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed.,
Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p105-115.

Network Amilications of the 1150-20.

Network Applications of the USGS Branch Model, Ray-mond W. Schaffranck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1159-1164

A Numerical Model Simulation of Tidal Currents in Long Numerical Moleck Island Sounds, L. Charles Sun, Estu-arine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p513-524.

Cheng, ed. and Craig Swanson, ed., 1992), p513-524.

Numerical Simulation of a Shallow Estuary—Weeks Bay,
Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder,
(Estuarine and Coastal Modeling, Malcolm L. Spaulicing, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p418-429.

Numerical Simulation of Tidally Induced ThreeDimensional Hydrodynamics of New York Bight, K.
W. Kim, N. W. Scheffner, D. J. Mark and B. H. Johnson, (Estuarine and Coastal Modeling, Malcolm L.
Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed.,
Ralph Cheng, ed. and Craig Swanson, ed., 1992),
p466-475.

Passive Dispersive Transport Modelling: Comparison with Experimental Rhodamine Data in the Elbe Estuary, Germany, Joachim Krohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p127-139.

Proposed Similarity Law for Surface Velocity in Hydrau-lic Models, Dajin Yu and Weijun Zhao, HY Sept. 92, p1318-1325.

Rapidly Varied Flow Analysis of Undular Bore, Rodney J. Sobey and Maarten W. Dingemans, WW July/Aug. 92, p417-436. Review of Equations of Conservation in Curvilinear Co-ordinates, Pei-Fang Wang, EM Nov. 92, p2265-2281. Sensitivity of Flow and Salt Transport to Uncertainties at Open Boundaries: A 3-D Experience, Bernard B. Hsieh and Billy H. Johnson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.720-732.

Simulating THM Formation Potential in Sacramento Delta: Part I, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p.513-529.

Simulating THM Formation Potential in the Sacramento Delta: Part II, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p.530-542.

Simulating of Three-Dimensional Hydrodynamics in Long Island Sound: Seasonal Timescale, Eugene J. Wei, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.441-452.

A Study of Salt Transport Processes in Delaware Bay, Roy A. Walters, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.441-452.

berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1923), p240-251.

Techniques for Visualization of Estuarine and Coastal Flow Fields, S. E. Rennie and J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p48-55.

Thermal Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604.

A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, Kwang-W. You, Lie-Yauw Oey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p53-465.

Tidal Influence on the Stratification of the Miramichi Estuary, A. St-Hilaire, C. Bettignies, D. Booth and E. M. P. Chadwick, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p953-958.

Two-Dimensional Circulation Modeling of the Pamlico River Estuary, North Carolina, G. L. Giese and Jerad D. Bales, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p607-619.

Water Constituents in the Weser Estuary (Germany), Wester Constituents in the Weser Estuary (Germany).

you'relay. Modelling: Prediction of the Transport of Water Constituents in the Weser Estuary (Germany, Agmar Müller, Iris Grabemann and Bernhard Kunze, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Ethies

ASCE Should Have a Construction Safety Committee, C.
E. Jackson, Jr., El Jan. 92, p36-59.

Civil Engineers Shaping Society: Our Social Responsibilities, Dennis A. Randolph, El Jan. 92, p10-15.

Convention Costs Out of Line with Engineer Image (ltr),
J. L. Thomas, CE Jan. 92, p32.

Dialogue on Political Contributions and Engineering,
William E. Norris, El Jan. 90, p38-41.

Engineering Ethics in A Multicultural Global Economy,
Richard H. McCuen, El July 91, p258-266.

Ethical, Legal and Professional Responsibilities of Engineers Owners and Contractors, Lawrence I. Erdos,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p898-1002.

Ethics and Pitfalls, Jack P. Norris, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p1101-1104.

Guidance for Engineering-Design-Class Lectures on Eth-ics, Richard H. McCuen, El July 90, p251-257. New Ethical Standards Issued for Federal Employees, NE Sept. 92, p3.

New Federal Ethics Regulations Deferred—For Now at Least, NE Feb. 92, p1.

Plain Engineering: Philosophical and Ethical View, Steven S. Crider, El Apr. 90, p148-155.

Practitioner Involvement with Engineering Ethics and Professionalism, Enno Koehn, El Jan. 92, p49-55. Proper Use of P.E. Seal, Robert A. Green, El July 90, p287-292.

To the President (ltr), A Group of Disillusioned ASCE Members, CE Jan. 92, p29-30. Where Should the Profession Stay? (ltr), CE Apr. 92, p32.

A European Road Comes to the U.S. John Prendergast, CE May 92, p52-54. Europeans Get What They Pay For, CE Sept. 92, p11. Group Explores Eastern Bloc Market, CE June 92, p11.

Phased Assembly of a European Space Station, David A. Nixon and Robin C. Huttenbach, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p850-861.

Underground Research: Here and There, Raymond L. Sterling, CE Dec. 92, p56-58.

United States Metrication and the EC 92, A. I. Johnson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p571-576.

Eutrophication

The Effects of Land Applied Water Treatment Residuals on Soil Phosphorus, James R. De Wolfe and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p297-302.

Liberty Reservoir Stormwater Retrofit Project, George G. Balog, William P. Stack, Kenneth T. Belt and Prakash Mistry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p346-351.

Partitioning Phosphorus Loads: Implications for Lake Restoration, Thomas M. Heidtke and Martin T. Auer, WR Sept./Oct. 92, p562-579.

wk Sept. Oct. 22, 1502-317.
Thirty Year Simulation of Chesapeake Bay Eutrophication, Carl F. Cerco and Thomas M. Cole, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p116-126.

Evacuation Modeling Near a Chemical Stockpile Site, Donald E. Newsom, Marc A. Madore and Robert T. Jaske, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p180-184.

Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p25-32.

Evaluation Basic Properties of Sand and Gravel Filters (Paper intro-duced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p366-383.

Singh, ed., 1992), p366-383.
Bridge Evaluation for Multipresence of Vehicles, Baidar Bakht and Leslie G. Jaeger, ST Mar. 90, p603-618.
An Evaluation of Early Application of the Transuranic Burning Concept. E. Rodwell, R. A. Shaw and R. F. Williams, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1373-1380.

An Evaluation of Highway Flood Damage Statistics, Jen-nifer Rhodes and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1082-1087.

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299.

Evaluation of Processing Options for Lunar Oxygen Pro-duction, Andrew Hall Cutler and Robert D. Waldron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p704-713.

Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, Kanwar Rai, M. S. Kumra and A. N. Prasad, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p899-903.
Field Evaluation of Strain Gauges in Asphalt Concrete Pavements, Peter E. Sebaaly and Nader Tabatabaee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eston, ed., 1992), p382-396.
Flow Distribution in a Stacked Clarifier, M. Padmanabhan, T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pieroe Linaweaver, ed., 1992), p628-633.
Framework for Evaluation of Lunar Base Structural Concepts, Haym Benaroya and Mohammed Ettouney, AS Apr. 92, p187-198.
Guide for Evaluating Engineering Software: Organization Impact (Book Review), Philip Terry, CC Feb. 92, p2-3,5.

Guide for Evaluating Engineering Software: Software Use and User Qualifications (Book Review), Philip Terry, CC Jan. 92, p2-3.

Legal Logistics of Software Evaluation, Philip Terry, CC Apr. 92, p1-3.

Legal Logistics of Software Evaluation, Philip Terry, CC Apr. 92, pl.3.
 Legal Logistics of Software Evaluation, Philip Terry, CC May 92, pl.11-13.
 Magnitude of the Scour Evaluation Program, Lawrence J. Harrison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl067-1071.
 Merging Field & Laboratory Bridge Scour Data, J. Sterling Jones, Peggy A. Johnson and Arthur C. Parola, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl100-1105.
 A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2,4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, P. S. Ho and W. F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p364-369.
 Probabilistic Evaluation of Bearing Capacity of Shallow Foundations, Azm S. Al-Homoud, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p352-355.
 Probabilistic Evaluation of Redundancy of Bridge Structures. Robert W. Krizier and Lamshid Mohammadi.

Foundations, Azm S. Al-Homoud, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p352-355.

Probabilistic Evaluation of Redundancy of Bridge Structures, Robert W. Kritzler and Jamshid Mohammadi, (Probabilistic Hechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p156-159.

Procedures for Evaluating Aggregate Gradation Specifications, Edwin C. Novak, Jr., (Materials: Performance and Prevention of Deficiencies and Faitures, Thomas D. White, ed., 1992), p261-274.

Rehabilitating Irrigation Systems from the 20th Century for the 21st Century, Gary L. Parker, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p281-285.

Response of Secondary Systems to Short Duration Stochastic Input, R. Sinha and T. Igusa, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p447-450.

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jasekskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Sour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Selecting Financial Management Software, Sharon O'Donnell, CC July 92, p14.

Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p70-75.

Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmm.), CO Sept. 91, p521-536.

United States Geological Survey Bridge Scour Evaluation Program in Texas, David D. Dunn and Henry R. Hejl, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmi

USAF's New Contingency Soils/Pavement Testing Van, Mark S. Buncher and Don J. Christiansen, (Road and Airport Pavement Response Monitoring Systems, Vin-cent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p27-40.

p27-40.

Evaporation

2-D Evaporation and Root Extraction in an FEM, Richard G. Allen and Wigdan I. Ahmad, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p189-196. Alternative Methods of Drainage Management in San Joaquin Valley, California, S. Alireza Taghavi and Ben Everett, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337. Equation for Evaportanspiration Conversions, Richard L. Snyder, IR Nov./Dec. 92, p977-980.

Modeling Desiccating Behavior of Mine Tailings, Gareth E. Swarbrick and Robin Fell, GT Apr. 92, p540-557.

Modeling of Soil Venting Processes to Remediate Unsaturated Soils, Suresh Lingineni and Vijay K. Dhir, EE Jan./Feb. 92, p135-152.

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojas and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p158-163.

Gabriel G. Katul, Richard H. Cuenca, Philippe Grebet, James L. Wright and William O. Pruitt, IR July/Aug. 92, p601-618

Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.

Applications of Remote Sensing to Irrigated Agriculture, Christopher M. U. Neale and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p541-

Economical and Statistical Based On-Farm Irrigation Scheduling, L. Niel Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p146-151.

Equation for Evaporation Pan to Evapotranspiration Conversions, Richard L. Snyder, IR Nov./Dec. 92, p977-980.

Estimation of Daytime Net Radiation Over Well-Watered Grass, A. Dong, S. R. Grattan, J. J. Carroll and C. R. K. Prashar, IR May/June 92, p466-479.

watered Grass, A. Dong, S. R. Grattan, J. J. Carroii and C. R. Frashar, IR May/June 92, p466-479. 
ET from Shallow Groundwater Maintained by Controlled-Drainage/Subiringation System, James L. Fouss and James S. Rogers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p394. 
ETBC: Interactive Software for Bianey-Criddle Estimates of Evapotranspiration, Ronald L. Elliott, Eldon L. Johns and Paul A. Weghorst, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-133. 
Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p178-131. 
Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p171-176. 
Irrigation Timing for Wheat Based on Climate, Crop, and

man, co., 1992, pt 11-176.

Irrigation Timing for Wheat Based on Climate, Crop, and Soil Data, R. P. Tripathi, IR May/June 92, p370-381.

Modeling Irrigation Schedules for Lowland Rice with Stochastic Rainfall, Aflab H. Azhar, V. V. N. Murty and H. N. Phien, IR Jan/Feb. 92, p36-55.

Precision of Evapotranspiration Estimates Using Neu-tron Probe, Osmar A. Carrijo and Richard H. Cuenca, IR Nov./Dec. 92, p943-953.

IR Nov. Dec. 24, 5943-953.
Predicting Water Demand in Agricultural Regions Using Time Series Forecasts of Reference Crop Evapotranspiration, John C. Tracy, Miguel A. Maribo and S. Alireza Taghavi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p50-55.

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojas and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p158-163.

Simulated Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p177-182.

Standard Reference Evapotranspiration Calculations: REF-ET, Richard G. Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p140-145.

Stochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/Aug, 92, 9527-542.

Lands, D. Mukherjee and N. T. Kottegoda, IR July/ Aug. 92, p527-542.
Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, Dennis L. Corwin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p152-157.
Water Quality Effects on Eucalyptus ET, Allen Dong, Kenneth Tanji, Steve Grattan, Fawzi Karajeh and Marc Parlange, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p164-170.

Evolution, development Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200.

Analysis of Performance of Pile Groups Adjacent to Deep Excavation, Richard J. Finno, Samir A. Lawrence, Na-bil F. Allawh and Indra S. Harahap, GT June 91, p934-955.

uilding Response to Excavation-Induced Settlement, Marco D. Boscardin and Edward J. Cording, GT Jan. 89, p1-21.

Construction Induced Movements of Insitu Walls, G. Wayne Clough and Thomas D. O'Rourke, (Design and Performance of Earth Retaining Structures, Philip Lambe, ed. and Lawrence A. Hansen, ed., 1990), p439-

Contracting and Legal Issues, Robert A. Rubin and Jean-nette L. Molina, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p6-25.

man, ed., 1992), p6-25.

Deep Cuts and Ground Movements in Chicago Clay, Richard J. Finno, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143.

An Embankment on Soft Clay With an Adjacent Cut, Walter Steiner, Richard Metzger and W. Allen Marr, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720. 1992), p705-720.

Estimating Pit-Excavation Volume Using Cubic Spline Volume Formula, Chun-Sung Chen and Hung-Cheng Lin, SU May 91, p51-66.

Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

87262-906-6, 272pp.
Excavation and Support Systems in Urban Settings, J. P. Gould, G. J. Tamaro and J. P. Powers, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171.
Excavations and Contamination, Bryan P. Sweeney and Joel S. Mooney, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p26-45.
Free Boundary, Fluid Flow, and Segnage Forces in Exca-

man, ed., 1992), p26-45.
Free Boundary, Fluid Flow, and Scepage Forces in Excavations, Ronaldo I. Borja, GT Jan. 92, p125-146.
French Research Program CLOUTERRE on Soil Nailing, F. Schlosser, P. Unterreiner and C. Plumelle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p739-750.

1992), p739-750.
Geological Mappability of Bored Versus Drill and Blast Excavations for Radioactive Waste Repositories, Bjorn Nilsen and Levent Ozdemir, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1499-1506. Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-261.

In Too Deep, Robert A. Rubin and Jeannette L. Molina, CE Dec. 92, p67-69.

Limehouse Link Tunnel Project—London—A Case History, Patrick McCreight, David Scott and George Tamaro, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p65-90.

Lunar He-3 Mining: Improvements on the Design of the UW Mark III Lunar Miner, Igor N. Sviatoslavsky, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1080-1091.

Mining for Building Expansion, Richard M. Croswell, Robin B. Dill and John Booth, CE Dec. 92, p48-51.

Mobile Continuous Lunar Excavation, John L. Paterso (Engineering, Construction, and Operations in Spa III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell Miller, ed., 1992), p1070-1079.

Modeling Effects of Chemical Explosives for Excavation on Moon, Deborah J. Goodings, Chaun-Ping Lin, Richard D. Dick, William L. Fourney and Leonhard E. Bernold, AS Jan. 92, p44-58.

Object-Oriented Programming in Robotics Research for Excavation, Darcy M. Bullock and Irving J. Oppenheim, CP July 92, p370-385.

Permanent Excavation Support and Underpinning in Sands: A Case History, Russell J. Morgan, Lawrence F. Johnsen and Franklin M. Grynkewicz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p778-

Principles of Control for Robotic Excavation, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1401-1412.

Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992). p791-802

Sediment Sampling Techdniques in Complex Environ-ments, John J. Nocera, Gregory P. Matthews and Thomas M. Simmons, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 992-97.

Slope Stabilization at the Forks of Butte Project, Stephen J. Klein and David K. Hughes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p905-922.

Specs May be Written for Trenchless Construction, CE July 92, p29.

SSC Tunnel Job Awarded, but Japan Witholds Funds, CE Mar. 92, p14,16.

Temporary Tunnel Excavation Support by Chemical Grouting, Francis B. Gularte, Gary E. Taylor and Roy H. Borden, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p423-435.

Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536.

Tunneling Set to Begin on Boston Harbor Tunnel, CE Apr. 92, p12. Underwater Slope Failure, Port Hueneme, W. H. Roth, D. T. Liu, M. Tischuk and T. Hjort, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p940-955.

Use of Explosives on the Moon, Richard D. Dick, William L. Fourney, Deborah J. Goodings, Chaun-Ping Lin and Leonhard E. Bernold, AS Jan. 92, p59-69.

Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 9378-389.

Analytical Methods for the Determination of Correla-tions and Spectra of Nonlinear System Response, R. Valéry Roy and Pol D. Spanos, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p412-415.

Dynamic Behavior of Nonlinear Cable System. II, S. Mesarovic and D. A. Gasparini, EM May 92, p904-920.

Dynamic Stability of Composite-Material Circular Cylin-drical Shells with Orthogonal Stiffeners, C. W. Bert, C. D. Kim and V. Birman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p652-655.

Equivalence Between Motions with Noise-Induced Jumps and Chaos with Smale Horseshoes, Michael Frey and Emil Simiu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p660-663.

An Exact Expression for the Distribution of Linear Com-binations of Uniform Random Variables, Chung-Chih Lin and Marc P. Mignolet, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p555-558.

Harmonic Excitation of an Unconstrained Saturated Particle Bed, Harri K. Kytömaa and Charles C. Abnet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p640-643.

Investigation of Parametrically-Induced Excitation in Concrete Columns, Nader Ghafoori and Kambiz Farhang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1051-1054.

Large-Displacement Effects on Dynamic Response of Eccentric Buildings, Lidia La Mendola and Maurizio Papia, EM May 91, p954-973.

Linear System Spectral Moments Determination, Pol D. Spanos and Scott M. Miller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p192-195.

Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p292-295.

Nonlinear Impact and Chaotic Response of Slender Rocking Objects, Solomon C. S. Yim and Huan Lin, EM Sept. 91, p2079-2100.

Nonlinear System under Non-Gaussian Impulsive Noise Excitation, G. Q. Cai and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p148-151.

On the Approximated Solution of Non-Linear Systems Under Non Gaussian Excitations, G. Falsone and M. Vasta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p140-143.

Parametric and External Excitation of Marine Risers, S. K. Thampi and J. M. Niedzwecki, EM May 92, p942.

Polynomial Chaos for Nonlinear Random Vibration, R. Ghanem and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p404-407.

Pre-Envelope Covariance Differential Equations, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p180-

Random Vibration of the Viscoelastic Structure under Series of Stochastic Excitations, Pawel Sniady and Stan-islaw Zukowski, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p152-155.

Random Vibration under Propagating Excitation: Closed-Form Solutions, Ronald S. Harichandran, EM Mar. 92, p575-586.

Reliability of Degrading Dynamic Systems with Applica-tions, Mircea Grigoriu and Igor Rychlik, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p300-303.

Response of Mono-Coupled Distributed Parameter Systems to Random Excitation, D. M. McFarland, L. A. Bergman and G. G. Lueschen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p576-579

Responses of Nonlinear Oscillators Excited by Non-Gaussian Pulse Processes, Sau-Lon James Hu, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p144-147.

Truncation of Infinite Hierarchy for Hysteretic Systems, George Tsiatas and Sau-Lon James Hu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p416-419.

The Caisson Solution, Bennie L. Benjamin, Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47.

A Competitive Framework for Evaluating the Economic Benefits of Port Improvements, Ira Hirschman and Ogden Beeman, (Ports '92, David Torseth, ed., 1992), p563-576.

Evaluation of Erosion Potential at Pipeline Crossings, David T. Williams, Samuel Carreon, Jr. and Jeffrey B. Bradley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694.

Hedratecture in Severe Climates, Joseph J. Mangan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-170.

206

Model Tests for Expansion of Anaheim Bay Naval Har-bor, Robert R. Bottin, Jr. and Dan Muslin, (Ports '92, David Torseth, ed., 1992), p768-776.

One-Dimensional Model for Analysis of CRC Pavement Growth, Dapeng Xin, Dan G. Zollinger and Ray W. James, TE July/Aug. 92, p557-575.

Optimal Capacity Expansion in Multi-Aquifer Systems, Hasan Yazucqil, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 0432-438

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.

acuum Alumina Unloader for Port of Everett, Curtis O. Hecla, (Ports '92, David Torseth, ed., 1992), p143-149.

Expansion joints

Evaluating Polymer Concrete Bridge Expansion Joints

Using Acoustic Emission, M. J. Woodard and S. S.

Kuo, (Engineering Mechanics, Loren D. Lutes, ed. and

John M. Niedzwecki, ed., 1992), p409-412.

On the Fatigue Loading for Local Components, Akhilesh

Chandra Agarwal, (Probabilistic Mechanics and Struc
tural and Geotechnical Reliability, Y. K. Lin, ed.,

1992), p583-586.

Temperature Dependent Bridge Movements, Shashi Moorty and Charles W. Roeder, ST Apr. 92, p1090-1105

Evaluation of Expansive Clay Soils in Tucson, Arizona, Mark W. Brooks and Edward A. Nowatzki, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p220-223.

Expansive soils

Damage to Two Apartment Buildings Due to Moisture Variation of Expansive Soil, Robert W. Day, CF Aug.

Irrigation, Drainage, and Landscaping for Expansive Soil, Robert W. Day, IR Mar./Apr. 92, p285-290.

Soil Suction-Potential Model, Abdulmohsin W. Dhowian, GT Apr. 92, p521-539. Swell versus Saturation for Compacted Clay, Robert W. Day, GT Aug. 92, p1272-1278.

Walking of Flatwork on Expansive Soils, Robert W. Day, CF Feb. 92, p52-57.

# Experience

Acquisition of Expert Judgment: Examples from Risk Assessment, Stephen C. Hora, EY Aug. 92, p136-148.

Civil Engineering Experience and Education, Semra Siber Uluatam, El Jan. 92, p71-76.

Experience-Based Issues in Construction Education, Amarjit Singh, El Oct. 92, p388-402.

Give Partnering a Chance (ltr), Ronald B. Sieger, David Roberts and Lynn White, CE Sept. 92, p36.

Reappraising the Space Shuttle Program, Roger A. Pielke, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2220-2230.

## Experimental data

Entrainment of Bed Sediment Into Suspension, Marcelo Garcia and Gary Parker, HY Apr. 91, p414-435.

Kinematics of 2-D Transient Water Waves Using Laser Doppler Anemometry, Cheung H. Kim, Robert E. Randall, Sung Y. Boo and Martin J. Krafft, WW Mar./Apr. 92, p147-165.

3c, p. 17-17-103.
Soft Clay Subgrade Stabilization Using Geocells, S. Y. Mhaiskar and J. N. Mandal, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1092-1103.

Experimental design
Experiences with Experimental Design Schemes for Failure Surface Estimation and Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p252-255.

Experimentation

Behavior of Isotropic R/C Bridge Decks on Steel Girders, I. -K. Fang, J. Worley, N. H. Burns and R. E. Klingner, ST Mar. 90, p659-678.

Design and Construction of Two Major Experiments at the URL, P. M. Thompson, B. H. Kjartanson and R. S. Read, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1082-1089.

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1073 1085.

p1972-1984.

Dusty Roads? Just Beet It, CE Nov. 92, p10.

Dynamic Experiments on Two Pile Groups, H. El-Marsafawi, Y. C. Han and M. Novak, GT Apr. 92,

ESCAPE: Small Payload Strategies, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl542-1545.

Experimental Characterization of Jet Forces on Waste Tank Components, Judith Ann Bamberger, James M. Bates and E. Dale Waters, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p628-635.

Experimental Performance of Long Links in Eccentrically Braced Frames, M. D. Engelhardt and E. P. Popov, ST Nov. 92, p3067-3088.

Experimental Studies for the Port of Bilbao Extension, José R. Iribarren and María J. Martín, (Civil Engineer-ing in the Oceans V, Robert T. Hudspeth, ed., 1992),

Experimental Study of the Transient Temperature Distri-butions in Concrete, Paul C. Hoffman and Stanley K. Ciesielski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p200-

Experimental Validation of a Probabilistic Fracture Mechanics Model, Mircea Grigoriu and A. R. Ingraffea, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p443-446.

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, pl 382-1401.

Full Scale Tests on Concentrically Loaded Fiber-Reinforced Pultruded Columns, D. W. Scott, S. J. Yoon and A. Zureick, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576.

The German Participation in the Soviet MARS 94/96 Mission, Klaus Proetel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2293-2304.

The Granddaddy of All Megaprojects, CE Nov. 92, p10. Hydraulic Properties of a Fine-Grained Soil Under Vari-ous Capillary Pressures and Loadings, Aladdin Shaikh and John D. Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p648-

Linar Farside, Mars Polar Cap, and Mercury Polar Cap Neutrino Experiments, Jonathan V. Post, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2252-2263.

Measured and Simulated Response of a Small Semisub-mersible Moored in Deep Water, Robert F. Zueck, Stuart F. Pawsey and Steve J. Leverette, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed.,

Measurement and Prediction of Surface Shear Stress in Annular Flume, D. I. Graham, P. W. James, T. E. R. Jones, J. M. Davies and E. A. Delo, HY Sept. 92, Jones, J. M p1270-1286.

Mechanics of Granular Materials at Very Low Effective Stress Levels, Stein Sture, Nicholas C. Costes and David F. McTigue, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1038.

Modeling the Chaotic Behavior in Simple Shear Granular Flows, Jan-Olov Aidanpää, Hayley H. Shen and Ram Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1031-1034.

Pavement Surface Maintenance: Overview of SHRP H-106 Experimental Installations, Russell Romine, David Peshkin, Kelly Smith and Tom Wilson, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl 46-159.

Phase Stability of Simulated Nuclear Waste Glasses, I. Joseph, T. V. Palmiter and L. D. Pye, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Residual Stresses in Cold-Formed Steel Members, C. C. Weng and Teoman Pekoz, ST June 90, p1611-1625.

Strength of Composite Slabs, W. Samuel Easterling and Craig S. Young, ST Sept. 92, p2370-2389.

Wave Runup and Forces on Cylinders in Regular and Random Waves, John M. Niedzwecki and Arun S. Duggal, WW Nov./Dec. 92, p615-634.

Wave Slamming on a Horizontal Circular Cylinder, Mi-chael Isaacson and Sundar Prasad, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992),

### Expert systems

Advanced Construction Management for Lunar Base Construction—Surface Operation Planner, Robert P. Kehoe, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1546-1556.

Application of Neural Network to Groundwater Remediation, J. H. Garrett, Jr., S. Ranjithan and J. W. Eheart, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p259-267.

Automatic Generation of Simulation Codes in Construc-tion, Ali Touran, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1050-

Basic Principles and Techniques in Knowledge Acquisi-tion, Kenneth L. Modesitt, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), pl 1-49.

Building KBES for Diagnosing PC Pile With Inductive Learning, Yi-Cherng Yeh, Yau-Hwaug Kuo and D. S. Hsu, CP Apr. 92, p200-219.

Combined Symbolic-Numeric Explosion Damage Assessment for Structures, Theodor Krauthammer, Raman Muralidharan and Walter Schmidt, CP Oct. 92, p417-

A Connectionist Vertical Formwork Selection System, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1171-

CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.

Constructing Site Layouts using Blackboard Reasoning with Layered Knowledge, Iris D. Tommelein, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p214-258.

Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p355-

Decision Support System for Crop Planning during Droughts, H. Raman, S. Mohan and N. C. V. Ranga-charya, IR Mar./Apr. 92, p229-241.

A Design Component Library Based on Design Standards, M. Maher Hakim and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p105-112.

The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, Pankaj A. Arora and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p451-456.

A Diagnostic Aid for Wastewater Treatment Plants, Catherine D. Perman and Leonard Ortolano, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p86-104.

Distributed Approach to Optimized Control of Street Traffic Signals, Nicholas V. Findler and John Stapp, TE Jan./Feb. 92, p99-110.

Expert System for Agricultural and Water Quality Man-agement, William L. Magette and Adel Shirmohamma-di, (Irrigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992), p442-447.

1992), p442-447.
Expert System for Anaerobic-Digestion-Process Operation, Michael W. Barnett and John F. Andrews, EE Nov./Dec. 92, p949-963.
Expert System for Construction Safety. I: Fault-Tree Models, Fabian C. Hadipriono, CF Nov. 92, p246-260.
Expert System for Construction Safety. II: Knowledge Base, Fabian C. Hadipriono, CF Nov. 92, p261-274.
Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

An Expert System for Impeller Mechanical Design and Analysis, Wen Jeng Chen and Hong-Tsung Lin, (Engi-neering Mechanics, Loren D. Luttes, ed. and John M. Niedzwecki, ed., 1992), p936-939.

Expert System for Operating A Treated Water Supply System, Kent Keqiang Mao, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p867-871.

Expert System for Wastewater Collection System Infiltra-tion and Inflow Mitigation, Fadi A. Karas, Hany H. Zaghloul and Richard Scholze, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p121-128.

Expert System May Lead to Custom-Made Concrete, CE June 92, p30.

Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992, 0-87262-892-2,

Expert Systems: Ready to Hit the Road? James Denning, CE June 92, p71-74.

CE June 92, p1-14.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Frame-Based Representation, Mary Lou Maher and Priti Vora, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p66-79.

Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, Catherine D. Perman and Leonard Ortolano, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.

Allen, ed., 1992), p1 (6-213.
Framework of a Knowledge-Based Estimate Classification System, Irtishad U. Ahmad and Syed T. Rahman,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p967-974.

Jeff R. Wright, ed., 1992), p967-974.

Fuzzy Measures in the Knowledge Based Diagnosis of Seismic Vulnerability of Masonry Buildings, Alberto Bernardini, Roberto Gori and Claudio Modena, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28.

Generation of Examples for Training a Learning Design System, Yoram Reich, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p999-1006.

Graphical Object-Oriented Simulation Systems for Control of Contr

Graphical Object-Oriented Simulation System for Construction Process Modeling, L. Y. Liu and P. G. Ioannou, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1139-1146.

Implementing Uncertainty Treatment in AI Development Environment, Fabio Casciati and Debbie Liu, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p17-20.

Inductive Learning of Bridge Design Knowledge, Yoram Reich and Steven J. Fenves, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p169-189.

Inductive Learning of Wind Bracing Design for Tall Buildings, Mohamad Mustafa and Tomasz Ar-ciszewski, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p190-203.

1992), p190-22; p190-22; p190-22; p190-22; p190-22; p190-22; p190-22; p20-22; p20-22;

Interpreting Dredge Material Bioassay Data—COBIAA, Charles H. Lutz, Thomas M. Dillon, Mark H. Houck and Jeff R. Wright, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 2108-113

p108-113

ITS-CONCRETE: A Functional Description, H. Gordon Thompson, II. and Nelson C. Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p222-228.

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

and victor L. Santido, Con and J. 2, pt 19-19.

Knowledge Acquisition for an Expert System for Handling Customer Inquiries on Water Quality, Richard M. Males, Judith A. Coyle, Walter M. Grayman, Robert M. Clark, Harry J. Borchers and Beth G. Hertz, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992),

Knowledge Acquisition in Civil Engineering, Tomasz Ar-ciszewski, ed. and Lewis A. Rossman, ed., 1992, 0-87262-864-7, 232pp.

87262-864-7, 232pp.

Knowledge Based-Object Oriented Primitive Work Item Generation, Joon Won Lee, Francois Grobler and M. Kevin Parfitt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p959-966.

Knowledge Representation: An Overview, Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p1-14.

Knowledge Representation in Water Resource Management Using Prolog and Natural Language, Richard N. Palmer and Lynn Spence, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p144-160.

Knowledge Representation With Logic, Deepak Jain, Kincho H. Law and Helmut Krawinkler, (Expert Sys-tems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p15-42.

Knowledge-Based System for Design of Signalized Inter-sections, J. S. Linkenheld, R. F. Benekohal and J. H. Garrett, Jr., TE Mar./Apr. 92, p241-257.

Gartett, Jr., 1E Marchyl, 26, 1947-1948.

Knowledge-Based Systems in Structural Engineering in Germany, Nikolaus Fleischmann and Martina Schnellenbach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p558-565.

A Lisp Based Expert System Tool, K. M. Sakr and M. U. Hosain, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p888-895.

Machine Learning in Knowledge Acquisition, Tomasz Arciszewski and Wojciech Ziarko, (Knowledge Acquisi-tion in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p50-68.

Lewis A. Rossman, Gu., 1922, p. 30-30.
Neural Networks, J. H. Garrett, Jr., J. Ghaboussi and X. Wu, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), pl04-143.
Object-Oriented Programming, Walid T. Keirouz, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p80-103.

on Knowledge Representation and Knowledge Acquisi-tion in Structural Engineering, Nikolaus Fleischmann and Adam Borkowski, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p402-409.

Online Design Codes: An Integrated Approach, S. Malas-ri, J. C. Olabe and L. Y. Lin, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p285-292.

Reservoir Systems Analysis: Closing Gap Between Theory and Practice, Slobodan P. Simonovic, WR May/June 92, p262-280.

Risk Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, M. A. Cassaro, M. J. Cassaro, R. K. Ragade and S. Alexander, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p29-42.

Rule-Based Representation, Ashim Bose and Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p43-59.

- A Rule-Based System for Evaluating Final Covers for Hazardous Waste Landfills, Lewis A. Rossman and James T. Decker, (Experi Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p161-173.
- Site Event Advisor: Expert System for Contract Claims, James E. Diekmann and Knut Gjertsen, CP Oct. 92, p472-479.
- Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.
- SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.
- Systems Analysis in Water-Distribution Network Design: From Theory to Practice, I. C. Goulter, WR May/June 92, p238-248.
- Testing an Expert System for the Activated Sludge Process, Wenje Lai and P. M. Berthouex, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p124-146.

Text and Reference Books on Knowledge Acquisition and Machine Learning. Yoram Reich, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p204-214.

Time Series Prediction Using Neural Networks, James Villarreal and Paul Baffes, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p268-282.

Traffic Signal Using Mixed Controller Operations, S. Manzur Elahi, A. Essam Radwan and K. Michael Goul, TE Nov./Dec. 92, p866-880.

Using Expert Systems to Manage Professional Survey Practices, T. K. Koo and Y. B. Aw, SU May 92, p43-62. Water Planning Using an Expert GIS, Daene C. McKin-ney, David R. Maidment and Mustafa Tanriverdi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p219-259.

Exploration/Grouting in Cambro-Ordovician Karst, Joseph A. Fischer, Richard W. Greene, Joseph J. Fischer and Frank W. Gregory, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p350-359.

Modeling Effects of Chemical Explosives for Excavation on Moon, Deborah J. Goodings, Chaun-Ping Lin, Richard D. Dick, William L. Fourney and Leonhard E. Bermold, AS Jan. 92, p44-58.

Use of Explosives on the Moon, Richard D. Dick, William L. Fourney, Deborah J. Goodings, Chaun-Ping Lin and Leonhard E. Bermold, AS Jan. 92, p59-69.

- Combined Symbolic-Numeric Explosion Damage Assessment for Structures, Theodor Krauthammer, Raman Muralidharan and Walter Schmidt, CP Oct. 92, p417-
- An Event Size Probability Distribution for Risk Analysis, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p232-237.
- Theory of Chaos and Radionuclide Distribution, E. A. Yfantis, G. Miel and G. M. Gallitano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2339-2343.

Explosives
Out with the Old, Thomas B. Terpening and Michael
Irwin, CE Sept. 92, p50-53.
Principles of Control for Robotic Excavation, Leonhard
E. Bernold, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1401-1412.
Time-Dependent Cone Penetration Resistance Due to
Blasting, Wayne A. Charlie, Mutabhirwa F. J. Rwebyogo and Donald O. Doehring, GT Aug. 92, p1200-1215.

ogo and Donatd O. Decerring, Gr. Aug. 74, p. 200-12-12. Extraction procedures

Extraction of Potable Water from Urine for Space Applications, Peter J. Holland, Donald M. Bird and Carolyn

L. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-1689.

Flux of Metals Between Sediment and the Water Column, N. S. Simon and K. O. Dennen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p390-391.

NonPolar Organics Toxicity in a Municipal Effluent, Car-

ed., 1992), p390-391.

NonPolar Organics Toxicity in a Municipal Effluent, Carlos H. Victoria-Rueda, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p549-554.

Tackling Trapped Sediments, Scott A. Jenkins, Joseph Wasyl and David W. Skelly, CE Feb. 92, p61-63.

Extraterrestrial bases

Engineering, Construction, and Operations in Space III, 2 vols., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, 0-87262-868-X, 2513pp.

Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-

Beam-Column Behavior of Fabricated Steel Tubular Members, H. G. L. Prion and P. C. Birkemoe, ST May 92, p1213-1232.

94, pl.213-123.
Human Habitat Design for the Space Exploration Initiative, Robert Boyd, Scott Geels, Benton C. Clark and Carolyn Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p25-33.

Fabrica

Fabrics
Construction of Grout-Impregnated Fabric-Reinforced
Pipes, Robert Nicholls, CO June 92, p283-302.
Denver International Airport Fabric Roof Design, James
H. Bradburn, Horst Berger and Lee Erdman, (International Air Transportation: A New International Airport,
Robert E. Boyer, ed., 1992), p192-198.
Floating Fabric Over Georgia Dome, Matthys Levy, CE
Nov. 91, p34-37.
Mathematical Characterization of Fabric and Its Lieu in

NOV. 91, p34-37.
Mathematical Characterization of Fabric and Its Use in Mechanics of Geomaterials, B. Muhunthan and J. L. Chameau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p725-728.
Tensile Terminal, Horst Berger and Edward M. De Paola, CE Nov. 92, p40-43.

Facilities

The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257.
Boston's City within a City, Paul Tarricone, CE Oct. 92, p40-43.

Civil Engineering Education in Ecuador, Oswald Ren-don-Herrero and Joseph H. Sherrard, El Oct. 92,

don-Herrero and Joseph H. Sherrard, El Oct. 92, p415-419.
Controlling the Flow of Recyclable Material, David L. Snyder, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p9-21.
Emerging Issues in Transportation Facilities Management, Sue McNeil, Michael Markow, Lance Neumann, Jeffrey Ordway and Donald Uzarski, TE July/Aug. 92, p5171-495.

Estimating Functional Population for Facility Planning, Arthur C. Nelson and James C. Nicholas, UP June 92.

Arthur C. Neuson and Product Model, Gregory M. Per-p45-58.

A Facility Programming Product Model, Gregory M. Per-kinson, Francois Grobler and Victor E. Sanvido, (Com-puting in Civil Engineering and Geographic Informa-tion Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p41-48.

A Fast Algorithm for the Rectilinear Single Facility Location Problem, G. L. Xue and J. B. Rosen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1113-1120.
FM—An Educated, integrated Approach, Sine Hill, Cynthia Hallman and Richard Berner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p33-40.
INFO: An Information Framework for Facility Operators, James P. Beckett and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p57-64.
Integrating Facility Delivery through Spatial Information, Teresa M. Adams, Alan P. Vonderohe, Jeffrey S. Russell and James L. Clapp, UP Mar. 92, p13-23.
Manhattan Post Office Engulfs a Whole City Block, CE Jan. 92, p13-14.
Mixed Broken Glass Processing Solutions, Nathiel G.

Jan. 92, p13-14.

Mixed Broken Glass Processing Solutions, Nathiel G.
Egosi, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth
L. Bergeson, ed., 1992), p71-80.

Overview of Existing Lunar Base Structural Concepts,
Task Committee on Lunar Base Structures, AS Apr. 92,

p)159-174.

Partitioning of Elements by Refuse Processing, Robert K. Ham, Victor A. Hammer and Gary Boley, EE Sept./ Oct. 92, p725-743.

Planning and Budgeting for FAA Facilities and Equipment, James D. Bishop, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p239-243.

Technical Issues for Lunar Base Structures, Brent Sherwood and Larry Toups, AS Apr. 92, p175-186.

Testing an Expert System for the Activated Sludge Process, Wenje Lai and P. M. Berthouez, (Knowledge Acquisition in Civil Engineering, Tomasz Arctiszewski, ed. and Lewis A. Rossman, ed., 1992), p124-146.

Wastewater under Home Plate, Walter A. Bishop, Jr. and John S. Fraser, CE Oct. 92, p61-63.

Faculty
Civil Engineering Education in Ecuador, Oswald Rendon-Herrero and Joseph H. Sherrard, El Oct. 92,

Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163. Experience-Based Issues in Construction Education, Amarjit Singh, El Oct. 92, p388-402.

Future Concerns in Environmental Engineering Graduate Education, Richard G. Luthy, David A. Bella, James R. Hunt, James H. Johnson, Desmond F. Lawler, Charles R. O'Melia and Frederick G. Pohland, El Oct. 92. p361-380.

Tenure—Analysis for Professional Engineers in Educa-tion, William Lawson Magette, El Apr. 90, p142-147.

Analysis of Welded Tubular Connections Using Continuum Damage Mechanics, William F. Cofer and Jihad S. Jubran, ST Mar. 92, p828-845. Bearing Capacity of Expanded-Base Piles in Sand, William J. Neety, GT Jan. 90, p73-87.

liam J. Neely, GT Jan. 90, p73-87.

Failure modes

Bond Strength of Straight GFRP Rebars, S. Tao, M. R.
Ehsani and H. Saadatmanesh, (Materials: Performance
and Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p598-605.

Compressive Strength and Characterization of Failure
Modes for Polymer Concrete, S. Mebarkia and C. Vipulanandan, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedewecki, ed., 1992), p988-991.

Constitutive Model for Concrete in Strain Space, O. A.
Pekau, Z. X. Zhang and G. T. Liu, EM Sept. 92,
p1907-1927.

A Cumulative Failure Criterion of Concrete Under Uniaxial Dynamic Compressive Loading, Tianxi Tang and

Dan G. Zollinger, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p860-

80.3. A Discussion of the Numerical Modeling of Sea Ice Ridging, Mark A. Hopkins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p888-891. Influence of Seepage on Stability of Sandy Slope, C. van Rhee and A. Bezuijen, GT Aug, 92, p1236-1240.

Laboratory Testing of Mechanical Rock Bolts, Koon Meng Chua, Jerry Lovato and Roy Cook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Particle Analysis of Material Behavior—A Note on Continuum Assumptions, John R. Williams, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p179-183.

Prying and Shear in End-Plate Connection Design, Cameron P. Chasten, Le-Wu Lu and George C. Driscoll, ST May 92, p1295-1311.

Nasy 74, p1437-1311.
Retrospect and Prospect: Micromechanics, Sia Nemat-Nasser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p632.
Risk Based Structural Optimization, Palle Thoft-Christensen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p535-538.

p535-538.
p535-538.
Simplified Methods for Assessment of the Structural Integrity of Existing Steel Jacket Platforms in the Gulf of Mexico, Rajiv K. Asgarwal, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p750-769.
Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, Julio E. Pulido, Timothy L. Jacobs and Edison C. P. Lima, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p507-510.
Tests of Full-Size Pultruded FRP Grating Reinforced

Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.

Instability of Slopes with Nonassociated Flow, Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p288-291.

An Advanced First-Order Method for System Reliability, Sankaran Mahadevan and Thomas A. Cruse, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p487-490.

Analysis of Slope Failure and Remedial Design of an Earth Dam, Michael J. Mann and Robert E. Snow, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p923-939.

1992), py2.3-939.
Application of EPS for Slide Correction, Shan-Tai Yeh and John B. Gilmore, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1444-1456.

Balanced Seismic Design of Anchored Retaining Walls, G. Neelakantan, M. Budhu and R. Richards, Jr., GT June 92, p873-888.

June 92, p873-888.

Case History Evaluating Field Vane Correction Factors, W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani and Henry T. Taylor, (Slability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p737-755.

Cause and Mechanism of Failure Kettleman Hills Landfill B-19, Phase IA, R. John Byrne, J. Kendall and S. Brown, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1188-1215.

Centrifuse Models of Clay-Lime Reinforced Soil Walls.

Centrifuge Models of Clay-Line Reinforced Soil Walls, Erol Güler and Deborah J. Goodings, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1249-

Comparison of Some Importance Sampling Techniques in Structural Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p108-111.

Computed Versus Observed Seismic Response and Damage of Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1804-1821.

Michael N. Fardis, ST July 92, pl 804-1821.
Conditions for Initiation of Rainfall-Induced Debris
Flows, Nicholas Sitar, Scott A. Anderson and Kenneth
A. Johnson, (Stability and Performance of Slopes and
Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p834-849.
Contact Induced Damage, Leon M. Keer, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p502-505.

A Criticism of Statistical Methods in Probabilistic Models in Structural Reliability, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.236-239.

Design and Construction of a Bonded Fiber Concrete Overlay of CRCP (Louisiana, Interstate Route 10, August 1990), William M. King, Jr., William H. Temple and Steven L. Cumbaa, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p353-362.

Distributed Failure Analysis, Fallacies and Remedies, Kaspar Willam, Andreas Distache, Guillermo Etse and Paul Steinmann, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p772-775.

775.

Durability Failure of a Concrete Block Port Pavement, Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl-15.

Engineered Barrier System Failure Modeling: A Statistical Approach, Daniel B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), r401-408. p401-408

p401-408.

Featuating Damage Detection in Bridges, David F. Mazurek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p944-947.

Evaluation of Failure Potential in Mudstone Slopes Using Fuzzy Sets, Der-Her Lee and C. Hesin Juang, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, p1137-1151.

An Evaluation Study of Modified Mohr-Coulomb and Cap Models, Hamdan N. Al-Ghamedy and Sahel N. Abduljauwad, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p717-

720.

Fevolution of Damage in Brazilian Test Using Holographic Interferometry, A. Castro-Montero, Z. Jia and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p612-615.

Experiences with Experimental Design Schemes for Failure Surface Estimation and Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p252-255.

Failure Analysis of Masonry Structures, P. B. Shing, H. R. Lotfi, A. Barzegarmehrabi and J. Brunner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p780-783.

Niedzwecki, ed., 1992), p780-783.
Failure Criteria Interpretation Based on Mohr-Coulomb Friction, D. V. Griffiths, GT June 90, p986-999.
Failure Prediction of Anisotropic Material, Photios P. Papados and Paul N. Roschke, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1012-1015. Euli Sale.

Field Load Test on Full-Scale Reinforced Concrete Frame, Tso-Chien Pan, Siu Tee Wong, Hee Kiat Cheong and Kok Wai Phang, CF Aug. 92, p137-150. Fill-Slope Failure and Repair, Robert W. Day, CF Aug. 92, p161-168.

Financial Performance Analysis for Construction Indus-try, Roozbeh Kangari, Foad Farid and Hesham M. El-gharib, CO June 92, p349-361.

Fine Ottawa Sand: Experimental Behavior and Theoreti-cal Predictions, Panos Dakoulas and Yuanhui Sun, GT Dec. 92, p1906-1923.

First Order Importance Sampling Method and its Variance Reduction, Gongkang Fu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

1992), p568-571.

1992), p568-571.

First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p531-534.

First-Passage Failure Predictions for Yielding Primary-Secondary Systems, David C. K. Chen and Loren D. Lutes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p564-567.

Flawed Assumptions: Why Bridge Deck Joints Fail, Martin P. Burke, Jr., CE Nov. 91, p60-62.

Forensic Analysis of a Two-Component Joint Sealant Using FTIR-ATR, Laurand H. Lewandowski, Larry N. Lynch and Rogers Grabam, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p53-65.

Generalized Slope Stability Analysis: Interpretation, Modification, and Comparison, Dov Leshchinsky and Ching-Chuan Huang, GT Oct. 92, p1559-1576. Generalized Three-Dimensional Slope-Stability Analysis, Dov Leshchinsky and Ching-Chuan Huang, GT Nov. 92, p1748-1764.

92, pl. 148-1704.
The Great Chicago Flood of 1992, Randall R. Inouye and Joseph D. Jacobazzi, CE Nov. 92, p52-55.
High Order Statistics in Structural Reliability, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p244-247.

Geotechnical Reliability, Y. K. Lin, ed., 1992), p244-247.

Howe Truss Behavior Interpreted by Deflections, Zbigniew Cywiński, Marek Jasina and Stefan Niewteki, CF Aug. 92, p151-160.

The Human Factor in Failures, George F. Sowers, CE Mar. 91, p72-73.

Hydraulic Fracturing in Low Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p94-119.

In-Place Shear Testing of Tile, Arthur P. Reed, Bruce A. Suprenant and Jim Acri, MT Aug. 92, p264-274.

Kettleman Hills Waste Landfill Slope Failure. I: Liner-system Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668.
Load-Duration Effects in Structural Lumber: Strain Energy Approach, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Sept. 92, p2351-2369.

Local Buckling of Tubes in Elastic Continuum, James A. Cheney, EM Jan. 91, p205-216.

A Mathematical Tool Set for SORM Reliability Methods, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p248-251.

p248-251.

Modified Stub-Girder Floor System: Full-Scale Tests, M. Ahmad, E. Y. L. Chien and M. U. Hosain, ST Nov. 92, p3222-3236.

p3222-3236.

Necessary Redundancy in Geotechnical Engineering, Jorj
O. Osterberg, GT Nov. 89, p1511-1531.

Nonlinear Modeling of Truss-Plate Joints, Leslie Groom
and Anton Polensek, ST Sept. 92, p2514-2531.

On Deciding Between the Use of Engineering Standards
and Risk Analysis, George W. Annandale, (Risk-Based
Decision Making in Water Resources V, Yacov Y.
Haimes, ed., David A. Moser, ed. and Eugene Z. Stakliv, ed., 1992, p219-233.

On the Response of Earth Dams Subjected to Earthquake
Fault Rupture, Jonathan D. Bray, Raymond B. Seed
and H. Bolton Seed, (Stability and Performance of
Slopes and Embankments III, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p608-624.

Perils of Point Loma, John Prendergast, CE Nov. 92,
p62-65.

Poc. 203.

Predicting Construction Contractor Failure prior to Contract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Predicting the Performance Limits of Soil-Culvert Systems, Yahia E. -A. Mohamedzein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911.

Premature Failure of Estemath. Placed Baileford Contractions of Contraction Contractions of Contractions of Contraction Contractions of Cont

Premature Failure of Externally Plated Reinforced Con-crete Beams, Deric John Oehlers and John Paul Moran, ST Apr. 90, p978-995.

Probabilistic Assessment of Spent-Fuel Cladding Breach, H. Foadian, Y. R. Rashid and K. D. Seager, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

Adioactive Waste Management Program Committee, 1992), p1018-1025.

Probabilistic Environmental Risk of Hazardous Materials, Timothy L. Jacobs and P. Aarne Vesilind, EE Nov./Dec. 92, p878-889.

Quantitative Study of Contractor Evaluation Programs and Their Impact, Jeffrey S. Russell and Edward J. Jaselskis, CO Sept. 92, p612-624.

Re-examination of Vinen and Other Column Equations, John J. Zahn, ST Oct. 92, p2716-2728.

Reliability Analysis of Uncertain Systems Under Random Locadings, Rwey-Hua Cherng and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability-Based Design for Feeeze-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p462-475.

Sandbridge Virginia Oceanfront Seawall Arbitration Hearing: Some Lessons Learned for Coastal Engineers, David R. Basco, Robert A. Dolan and Carter Sinclair, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1003-1020.

Second-Order Inelastic Analysis Methods for Steel-Frame Design, W. S. King, D. W. White and W. F. Chen, ST Feb. 92, p408-428.

Second 24, proto-428.

Second Induced on Stability of Bridge Abutments, D. J. Hagerty and A. C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

Seismic Stability Analysis of Landfill, Max Y. Ma, Albert T. Yeung and An-Bin Huang. (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724.

Sensitivity Evaluation of Simulation Methods for Reliability Assessment, Bilal M. Ayyub and Chao-Yi Chia, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p240-243.

cal Reliability, Y. K. Lin, ed., 1992), p240-243.

Simple Procedure for Determining Cap-Plasticity-Model Parameters. Tien-Kuen Huang and Wai-Fah Chen, GT Mar. 90, p492-513.

Slide Stabilization with Stone-Fill Trenches, George L. Sills and Robert L. Fleming, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1382-1394.

Slope Remediation, Manfred R. Hausmann, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1274-1317.

Softening and Snap-Through Behavior of Reinforced Elements, C. Bosco and A. Carpinteri, EM Aug. 92, p1564-1577.

Softening Models for Concrete: Stability and Uniqueness, Donald R. Curran, James K. Gran, Lynn Seaman and Tarabay H. Antoun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p369-

Static Instability and Liquefaction of Loose Fine Sandy Slopes, Poul V. Lade, GT Jan. 92, p51-71.

Stopes, Poul V. Lade, GT Jan. 92, p51-71.
Steady-State and Multiple Cracking of Short Random Fiber Composites, Victor C. Li and Christopher K. Y. Leung, EM Nov. 92, p2246-2264.
Strength of Concrete-Filled Thin-Walled Steel Box Columns: Experiment, Hanbin Ge and Tsutomu Usami, ST Nov. 92, p3036-3054.

ST Nov. 92, p.305-3034.
A Systems Reliability Approach to the Safety of Steel Connections, Janice J. Trautner and Richard M. Bennett, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.495-498.
Thoughts on Management of Acquisitions, Melville Hensey, ME Apr. 92, p.130-137.

sey, ME Apt. 2e, p130-137.
Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

Two Full Size Structures Reinforced by Geotextiles, Ph. Delmas, Ph. Gotteland, J. P. Gourc and S. Haïdar, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1201-1212.

1992), p1201-1212.
A Two-Stage Safety Assessment Methodology for Construction Activities, M. H. M. Hassan and B. M. Ayyub, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p515-518.
Underwater Slope Failure, Port Hueneme, W. H. Roth, D. T. Liu, M. Tischuk and T. Hjort, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p940-955.

Use of the Break-Off Method for the Evaluation of High Performance Concrete, Tarun R. Naik and Amr S. Has-saballah, (Materials: Performance and Prevention of De-ficiencies and Failures, Thomas D. White, ed., 1992), p92-106.

Failures, investigations
Forensic Analysis Techniques for Joint Sealants, Rogers
T. Graham and Larry N. Lynch, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p404-414.

The Human Factor in Failures, George F. Sowers, CE Mar. 91, p72-73.

Investigation of a Concrete Blistering Failure, R. S. Rol-lings and G. S. Wong. (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30.

ed., 1992), p16-30.

Investigation of L'Ambiance Plaza Building Collapse,
Daniel A. Cuoco, David B. Peraza and Thomas Z.
Scarangello, CF Nov. 92, p211-231.

Public-Safety Issues in Collapse of L'Ambiance Plaza,
Frank J. Heger, CF May 91, p92-112.

Supermarket Roof Collapse in Burnaby, British Columbia, Canada, C. Peter Jones and N. D. Nathan, CF Aug.
90, p142-160.

212

Falling bodies
Drag Coefficient and Fall Velocity of Nonspherical Particles, Prabhata K. Swamee and Chandra Shekhar P.
Ojha, HY May 91, p660-667.

Farm management
A Decision Support System for Water Quality Modeling,
D. S. Yakowitz, L. J. Lane, J. J. Stone, P. Heilman and
R. K. Reddy, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl88-193.
Participative Process in Tube Well Irrigation Development, Manuel Olin, IR Nov./Dec. 92, p882-894.

ment, Manuel Unin, IR NOV/IDE. 32, poo2-0578. The Proposed Waste Management Plan for Dairy Farm Wastes Polluting the Tangipahoa River and Lake Pontchartrain, Gianna M. Jones, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p656-661.

Farms

Format

W. Styles, Urrigation and Drainage: Saving a Threatende Resource—In Search of Solutions, Ted Engman,
ed., 1992), p300-304.
Design and Operation of On-Farm Irrigation Ponds, Brijesh Kumar Mehta and Akira Goto, IR Sept./Oct. 92,

Promoting Private Irrigation Development: The Irriga-tion Sector Program Experience in Nepal, Richard Reidinger and Upendra Gautam, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p22-1226.

Fast track construction
Dallas Light Rail Tunnel Breaks New Ground, CE July
92, p16,19.

92, p16,19.
Life in the Fast Track, Richard L. Ridings and Stephen B. Quinn, CE Apr. 92, p46-49.
A New Fast Track for Public Works, Bill Hirsh, CE Feb. 92, p45-47.
Perils of Point Loma, John Prendergast, CE Nov. 92, p62-65.

Fasteners

Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultruded Fiber-Reinforced Plastics Beams in Industrial Building Construction, Ethan A. Love and Tanongsak Bisarnsin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584.

Modeling Horizontally Nail-Laminated Beams, David R. Bohnhoff, ST May 92, p1393-1406.
Strength of Lag-Screw Connections, Thomas E. McLain, ST Oct. 92, p2855-2871. S1 Oct. 92, ps3-3-2071.
A Systems Reliability Approach to the Safety of Steel Connections, Ianice J. Trautner and Richard M. Bennett, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p495-498.

Aspects of Road-Accident Death Analyses, John C. Golias and Helen S. Tzivelou, TE Mar/Apr. 92, p299-311.

311.

Fatigue
Discrete Markov Process Approach to Fatigue Crack
Growth, T. J. Enneking and B. F. Spencer, Jr., (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p792-795.

Durability of MSW Fly-Ash Concrete, James R. Triano
and Gregory C. Frantz, MT Nov. 92, p369-384.

Effect of Tire Parameters on Pavement Damage and
Load-Equivalency Factors, Peter E. Sebaaly and Nader
Tabatabace, TE Nov./Dec. 92, p805-819.

Fatigue of Welded Cruciforms Subjected to Narrow-Band
Loadings, S. Sarkani, D. P. Kihl and J. E. Beach, EM
Feb. 92, p296-311.

A Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p320-323.

Statigue Fracture Reliability and Maintainability of Structural Systems: A Method of Analysis, C. J. Kung and P. H. Wirsching, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p436-439.

Inspection Planning for Surface Fatigue Cracks, P. Friis-Hansen and H. O. Madsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p312-315.

Linearisation and Offshore Fatigue Reliability, R. E. Melchers and M. Ahammed, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p5-8.

Low-Cycle Fatigue Prediction for Ramberg-Osgood Type Materials, Faisal H. Al-Sugair, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p432-435.

Mechanical Properties of High Performance Concretes, Shuaib H. Ahmad, Paul Zia, Mike Leming and M. R. Hansen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p864-867.

A Non-Gaussian Fatigue Model for Offshore Structures, Jin Wang and Loren D. Lutes, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p463-466.

On the Fatigue Loading for Local Components, Akhilesh Chandra Agarwal, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed.,

1992), p583-586.

Recent Findings in Active Structural Control, Craig A. Rogers, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p824-827.

Residual Strength of Structural Components Subjected to Cyclic Loads, Deric John Oehlers, ST Oct. 92, p2645-2658.

Secondary Stresses in Closed Orthotropic Deck Ribs at Floor Beams, Roman Wolchuk and Alexis Ostapenko, ST Feb. 92, p582-595.

Si Feo. 92, pode2-993.
Simulation of Improved Gaussian Time History, Loren D. Lutes and Jin Wang, EM Jan. 91, p218-224.
Some Remarks on BK-Models for Fatigue Crack Growth, M. M. Rocha and G. I. Schuëller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p316-319.

A Stochastic Approach to the Fatigue Reliability, Yuan Jie Lua, Wing Kam Liu and Ted Belytschko, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p324-327.

Stochastic Modeling of Fatigue Crack Growth with Retar-dation, Dhirendra Verma, Dario A. Gasparini and Fred Moses, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p433-436.

Systems Reliability Approach to Fatigue of Structures, A. Karamchandani, J. I. Dalane and P. Bjerager, ST Mar. 92, p684-700.

TLP Fatigue Due to Second-Order Springing, S. R. Winterstein, T. Marthinsen and T. C. Ude, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p455-458.

Fatigue life

Corrosion Fatigue of Deepwater Offshore Materials, Gordon F. Fowkes and Harris L. Marcus, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.

Fatigue Life of Offshore Steel Structures Under Stochas-tic Loading, Henning Agerskov and Niels Thougard Pedersen, ST Aug. 92, p2101-2117.

Fatigue Life Variability and Reliability Analysis of a Wind Turbine Blade, Paul S. Veers, Herbert J. Sutherland and Thomas D. Ashwill, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p424-427.

Free-Bending Fatigue Life Estimation of Cables at Points of Fixity, Mohammed Raoof, EM Sept. 92, p1747-

A Stochastic Model for Crack Initiation and Fatigue Life, Michael R. Emptage and Bevil J. Shaw, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p308-311.

Structural Efficiency of Internally Ring-Stiffened Steel Tubular Joints, D. S. Ramachandra Murthy, A. G. Madhava Rao, P. Gandhi and P. K. Pant, ST Nov. 92, p3016-3035.

Fatigue, materials
Durability Failure of a Concrete Block Port Pavement,
Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and
Failures, Thomas D. White, ed., 1992), p1-15.

Fatigue strength

Faugue strength
Adhesives and Structural Plastics, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571.
Fatigue Resistance of Large-Diameter Cable for Cable-Stayed Bridges, Koei Takena, Chitoshi Miki, Hirosuke Shimokawa and Kenji Sakamoto, ST Mar. 92, p701-715.

Fatigue Strength of Deteriorated Steel Highway Bridges, Patrick D. Zuraski and John E. Johnson, ST Oct. 90.

Fatigue Strength of Riveted Bridge Members, John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981.

Fatigue Strength of Welded Joints Under Broadband Loadings, David P. Kihl, Shahram Sarkani and James A. Kuny, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p428-431.

Fatigue tests

Damage of Concrete in Fatigue, A. Alliche and D.
François, EM Nov. 92, p2176-2190.

Statigue Resistance of Large-Diameter Cable for Cable-Stayed Bridges, Koei Takena, Chitoshi Miki, Hirosuke Shimokawa and Kenji Sakamoto, ST Mar. 92, p701-715.

Fatigue Strength of Deteriorated Steel Highway Bridges, Patrick D. Zuraski and John E. Johnson, ST Oct. 90, p2671-2690.

Fatigue Strength of Riveted Bridge Members, John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981.

p. Proposition of Welded Joints Under Broadband Loadings, David P. Kihl, Shahram Sarkani and James A. Kuny, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p428-

431.
First-Order Model for Durability of Hanford Waste Glasses as a Function of Composition, Pavel R. Hrma, Gregory F. Piepel, Michael J. Schweiger and Donald Esmith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1236-1243.
Risk Based Optimal Fatigue Testing, J. D. Sørensen, M. H. Faber and I. B. Kroon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p523-526.

Study Under Way on Railroad-Bridge Fatigue, CE Nov. 92, p19,21.

Feasibility studi

92, p19,21.

Peasibility studies
Artificial Recharge Feasibility Evaluation by Field Investigation, Maury E. Ford, Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Scott Keys, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647.

The Challenge of Kissimmee River Restoration, Stuart J. Appelbaum, (Water Resource: Flauning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p696-701.

The Feasibility of Processes for the Production of Oxygen on the Moon, Lawrence A. Taylor and W. David Carrier, Ill., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p752-762.

Feasibility of Water Supply for City of Houston Subsidence Zones Five and Six, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p480-485.

Lunar Surface Mine Feasibility Study, Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1092-1103.

Production of Oxygen by Electro-Reduction of Lunar Ores, B. Mishra, D. L. Olson, J. J. Moore and W. A. Averill, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677.
System Concepts for a Series of Lunar Optical Telescopes, Max E. Nein, Billy G. Davis and John D. Hilchey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831.

TRB Reports Weigh New Transport Technologies, CE Feb. 92, p20.

Federal agencies
FAA Storm Water Program, W. H. Espey, Jr., Raymond
Rose and George I. Legarreta, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p940-945.

1992), p940-945.
Five Years Later, How Are You Doing?, CE Dec. 92, p8.
Geotech Test Site Program Set, CE Dec. 92, p13-14.
Impact of Present Data Validation Practices on Risk Assessment of Hazardous Waste Sites, V. Balasundaram, C. Minch and N. Shashidhara, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p567-574.
Metrication Between Canada and the USA—A Staged Adoption, George E. Maddox, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p590-593.
New Ethical Standards Issued for Federal Employees, NE Sept. 92, p3.

Sept. 92, p3.

New Transportation Bill Dominates TRB Meeting, CE Mar. 92, p27-28. Planning and Budgeting for FAA Facilities and Equip-ment, James D. Bishop, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p239-243.

1992), p.239-243.

Rail Industry Trends Related to Waste Transportation, Ruth Maddigan, Marlene Owens and Paul Shelton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.130-1335.

United States Metrication and the EC 92, A. I. Johnson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p.571-576.

Water Management Under Drought Conditions an Over-view of Practices by Federal Agencies, Donald K. Frevert and Darrell G. Fontane, (Irrigation and Drainage: Saving a Threatened Resource-In tions, Ted Engman, ed., 1992), p601-605. -In Search of Solu-

Federal aid
Potential ISTEA Funds Boost Bridge Conference, CE
Aug. 92, p10,12.

Federal governm

Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

Huge Transportation Bill Signed by Bush; States Will Have Flexibility in Spending Federal Funds, NE Jan.

92, pl. 22, p1. Labeling of the Spent Fuel Waste Package, W. G. Culbreth and A. K. Chapari, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p395-400.

Management Program Committee, 1992), p.593-400. Launch Facilities as Infrastructure, Mike Trial, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.0064-2071. Policy Week Draws ASCE Leaders to Washington to Talk Issues, NE Apr. 92, p.3. Prospects for Clean Water Bill Hold Center Stage at Seventh Civil Engineering Summit, NE July 92, pl.4. Regulatory Requirements to Address Issues Related to

Regulatory Requirements to Address Issues Related to Voicanism and Magmatism: Code of Federal Regulatory, Title 10, Part 60, Disposal of High-Level Radioactive Wastes in Geologic Repositories, John S. Trapp and Philip S. Justus, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2039-2046.

Rush of Legislation Concludes 102nd Congress, Casey Dinges, CE Dec. 92, p112.

Transportation Bill Revises Federal Policy, Casey Dinges, CE Jan. 92, p106.

Federal laws
Affordable Financing—The Crux of Affordable Housing,
Rodolfo J. Aguilar, (Housing America in the TwentyFirst Century, Mehmet Inan, ed., 1992), p75-81.
ASCE Backs Revised Wetlands Manual From EPA, NE

Jan. 92, p2.

Aviation Bill Takes Flight, Casey Dinges, CE July 92, pl 14. Can Design Professionals Be Made Responsible for Safe-ty?, CE Nov. 92, p38.

ty?, CE Nov. 92, p38.
Disabilities Act Leads to Confusion, CE May 92, p8.
Government Declares War on Pirates, CC Dec. 92, p14.
Infrastructure Bill Clears Congress, NE Nov. 92, p3.
An Inside Look at the 40 CFR 191 Containment Requirements, Floyd L. Galpin, Raymond L. Clark and Caroline Petti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1047-1054.
Massive Finery Bill Advances Cause Dirace CE Am. 93 Massive Energy Bill Advances, Casey Dinges, CE Aug. 92,

p96.

A New Era In Transportation, John Prendergast, CE Apr. 92, p38-41. New Seismic Code Has Widespread Implications, CE

Nov. 92, p22.

So How Do We Build Now?, CE Feb. 92, p12.

Transportation Funding Precarious, Casey Dinges, CE Sept. 92, p114.

Water-Projects Bills, Casey Dinges, CE May 92, p122. We Need to Integrate Water Transportation and Environ-mental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p403-406.

Federal project policy
A New Era In Transportation, John Prendergast, CE Apr.
92, p38-41.

Federal role

ASCE President Tells House Panel More Transportation Research Funds are Needed to Revive U.S. Infrastruc-ture, NE Apr. 92, p1.

Canada's Green Plan: Unique Approach to Preserving Environment, Thomas J. Selinger, El Oct. 92, p349-

FEMA Study Evaluates Postdisaster Housing, CE Aug. Infrastructure Plans Profilerate, Casey Dinges, CE Mar. 92, p114.

Mixed Bag for CEs in Bush 1993 Budget, Casey Dinges, CE Apr. 92, p108.

The U.S. Bureau of Reclamation—New Directions in Water Management and Conservation, Allen R. Pow-ers, (Irrigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992), p232-237. Federal-state cooperation The Roads Ahead, Teresa Austin, CE Apr. 92, p54-57.

Bayesian Inference for Feedback Control. I: Theory, A. Clemmens and J. B. Keats, IR May/June 92, p397-415

Clemmens and J. B. Keats, IR May/June 92, p397-415.
Bayesian Inference for Feedback Control. II: Surface Irrigation Example, A. J. Clemmens and J. B. Keats, IR May/June 92, p416-432.
Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Faeh and Géraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1112-1117.
Eeethack Courted of Basin-Urrigation System A. J. Clemper 1992 (2012).

Feedback Control of Basin-Irrigation System, A. J. Clemmens, IR May/June 92, p480-496.
Multireservoir Sewer-Network Control via Multivariable Feedback, A. Messmer and M. Papageorgiou, WR. Nov/Dec. 92, p585-602.

Wave-Motion Stability in Canals with Automatic Con-trollers, Simion Hancu and Paul Dan, HY Dec. 92, trollers, Sim

Feedback loop

Feedback Mechanisms for Operational Simulation, Amr A. Oloufa and Keith C. Crandall, CP Apr. 92, p161-

Implementation of TQM in Building Design and Con-struction, Gerald W. Chase and Mark O. Federle, ME Oct. 92, p329-339.

The Application and Use of Impact Fees: Legal Issues, Charles L. Siemon, (Site Impact Traffic Assessmen: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.238-243.

Critical Elements of Development Impact-Fee Programs, Arthur C. Nelson, James C. Nicholas and Julian C. Juergensmeyer, UP May 90, p34-47.

Developers to Pay into Fund for Worker's Housing, CE Feb. 92, p28.

Impact Fees: Practical Guide for Calculation and Implementation, Dennis H. Ross and Scott Ian Thorpe, UP Sept. 92, p106-118.

Positive Influence of Impact-Fee Policy in Urban Plan-ning and Development, Arthur C. Nelson, James E. Frank and James C. Nicholas, UP June 92, p59-64.

Site Impact Analysis Using the Tranplan Computer Model, Robert B. Hearn and L. P. Ledet, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria. ed., 1992), p82-83.

Site Traffic Impact Analysis Process: The Developer's Perspective, Kenneth O. Voorhies, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p205-210.

Traffic Impact Fees in Schaumburg. Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p170-174. The Traffic Impact Study and Traffic Impact Fees, Timothy T. Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p228-232.

The Use of Road Impact Fees in the United States, James C. Nicholas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p164-169.

A Computational Berthing Model for the Design of Fender Systems, John R. Headland, (Ports '92, David Torseth, ed., 1992), p480-492.

Design Criteria for Ferry Landings, Charles T. Jahren, Ralph Jones and Seiichiro Ishii, (Ports '92, David Tor-seth, ed., 1992), p493-505.

Gate Maritime Wharf and Intermodal Facility, Viswanath K. Kumar, William L. Allen and Thomas A. Mantia, (Ports '92, David Torseth, ed., 1992), p43-57.

Modifications to Coal Pier 6 Made Necessary by a Deeper Channel, Zolan Prucz, Barney T. Martin and Jerry L. Richstein, (Ports '92, David Torseth, ed., 1992), p164-

Pre-Compression of Concrete Breasting Dolphins Solves Construction Problem, Robert A. Blowers, Alexander Matlin and Antoni J. Zelechowski, (Ports '92, David Torseth, ed., 1992), p602-615.

Recycled Materials for Port Construction, David S. Miller, (Ports '92, David Torseth, ed., 1992), p815-825. Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p591-

Seismic Rehabilitation of Seattle's Pier 69, David Pierce and Ronald E. Martinson, (Ports '92, David Torseth, ed., 1992), p418-428.

Design Criteria for Ferry Landings, Charles T. Jahren, Ralph Jones and Seiichiro Ishii, (*Ports '92*, David Tor-seth, ed., 1992), p493-505.

Pre-Compression of Concrete Breasting Dolphins Solves Construction Problem, Robert A. Blowers, Alexander Matlin and Antoni J. Zelechowski, (Ports '92, David Torseth, ed., 1992), p602-615.

Simulation of Two Approaches to Curb Potential Buildup of Nitrates in Groundwater, D. Adelman, S. Zheng and M. F. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p611-616.

Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Ran-dall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-

Piber composites

Determination of Interfacial Shear and Normal Stresses
in Fiber Pull-Out, Vistasp M. Karbhari, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p1004-1007.

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski
Brown, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),
p691-695.

Micromechanics Based Design for Pseudo StrainHardening in Cementitious Composites, Victor C. Li
and H. C. Wu, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p740743.

743.
Modeling Stiffness Degradation in Filamentary Composite Materials, Robert M. Hackett and Kerry T. Slattery, MT May 92, p196-211.
Optimization of Discontinuous Fiber Composites, Victor C. Li, M. Maalej and T. Hashida, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1000-1003.
Steady-State and Multiple Cracking of Short Random Fiber Composites, Victor C. Li and Christopher K. Y. Leung, EM Nov. 92, p2246-2264.

Fiber optics

Concrete Beam Testing with Optical Fiber Sensors, D.

Huston, P. Fuhr, P. Kajenski and D. Snyder, (Nondestructive Testing of Concrete Elements and Structures,
Farhad Ansari, ed. and Stein Sture, ed., 1992), p60-69.

Fiber Optics Detect Contaminants, CE Dec. 92, p8.

Fiber Optics Detect Contaminants, CE Dec. 92, p8.

Measuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, David W. Jensen and John M. Cory, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1273-1285.

1992), p1273-1285.
Real-Time Condition Monitoring of Concrete Structures by Embedded Optical Fibers, Farhad Ansari, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p49-59.
Smart Structures, Rita Robison, CE Nov. 92, p66-68.

Smart Structures, Rita Robison, CE Nov. 92, p66-68.

Fiber reinforced materials
Behavior of Externally Confined Concrete Columns, M.
W. Li, H. Saadatmanesh and M. R. Ehsani, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p677-690.

Combustion Synthesis of Advanced Materials, J. J. Moore, H. J. Feng, N. Perkins and D. W. Readey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1389-1400.

Comparison of Micromechanical Models for Elastic Properties, Cliff J. Lissenden and Carl T. Herakovich, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1309-1322.

Composite Materials for Structures on Planetary Surfaces, Donald W. Radford, Willy Z. Sadeh and Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1297-1308.

Constitutive Modeling of Slurry Infiltrated Fiber Concrete (SIFCON), David J. Stevens, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p992-995.

ed., 1992), p992-995.

ed., 1992), p992-995.
Deformational Behavior of Fiber-Reinforced Concrete Beams in Bending, H. V. Dwarakanath and T. S. Nagaraj, ST Oct. 92, p2691-2698.
Design and Construction of a Bonded Fiber Concrete Overlay of CRCP (Louisiana, Interstate Route 10, August 1990), William M. King, Jr., William H. Temple and Steven L. Cumbaa, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p353-362.
Effect of Micro-parameters on the Macroscopic Behaviour of Ductile Fiber Reinforced Brittle Matrix Composites, Christopher K. Y. Leung and Jeffrey Chi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p744-747.

The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, Marck-Jerzy Pindera and Alan D. Freed, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272.

Fiber: Good For the Concrete Diet? William C. Panarese, CE May 92, p44-47.

Fiber Pullout and Bond Slip. I: Analytical Study, Antoine E. Naaman, George G. Namur, Jamil M. Alwan and Husam S. Najm, ST Sept. 91, p2769-2790.

Fiber Suppressed Localization in Tension, B. Mobasher and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-

Flexural Analysis of Reinforced Concrete Beams Containing Steel Fibers, Byung Hwan Oh, ST Oct. 92, p2821-2836.

Flexural and Shear Studies of Carbon Fiber Reinforced Beams, Paul Zia, Shuaib H. Ahmad, Rakesh K. Garg and Kristina Hanes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p984-

Fracture Toughness Model of Fiber Reinforced Ceramics, Asher A. Rubinstein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.232-235.

Fracture-Based Two-Way Debonding Model for Discontinuous Fibers in Elastic Matrix, Christopher K. Y. Leung, EM Nov. 92, p2298-2318.

Full Scale Tests on Concentrically Loaded Fiber-Reinforced Pultruded Columns, D. W. Scott, S. J. Yoon and A. Zureick, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576.

Jet Grouting: State-of-the-Practice, J. L. Kauschinger, E. B. Perry and R. Hankour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p169-181.

May Issue Corners Engineers Concerns (ltr), Norman L Rabbers, CE July 92, p32-33.

Micromechanical Characterization of Damage-Plasticity in Metal Matrix Composites, George Z. Voyiadjis and Peter I. Kattan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p103-

Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, Ali M. Hamza and Antoine E. Naaman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p996-999.

Normal- and High-Strength Fiber-Reinforced Concrete under Compression, A. Samer Ezeldin and Perumalsamy N. Balaguru, MT Nov. 92, p415-429.

samy N. Balaguru, MT Nov. 92, p413-429.
Optimal Configuration for Fiber Reinforced Composites under Uncertainties of Material Properties and Loadings, Yoshisada Murotsu, Mistuanori Miki and Shaowen Shao, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p547-550.
Optimization of Discontinuous Fiber Composites, Victor C. Li, M. Maalej and T. Hashida, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1000-1003.
Posterack Scaling Relations for Fiber Reinforced Comput.

Postcrack Scaling Relations for Fiber Reinforced Cementitious Composites, Victor C. Li, MT Feb. 92, p41-57.

Properties of Aramid-Fiber Reinforced Concrete and SIF-CON, Antonio Nanni, MT Feb. 92, p1-15.

Real-Time Condition Monitoring of Concrete Structures by Embedded Optical Fibers, Farhad Ansari, (Nonde-structive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p49-59. Seismic Behavior and Shear Strength of Framed Joint Using Steel-Fiber Reinforced Concrete, Jiuru Tang, Chaobin Hu, Kaijian Yang and Yongcheng Yan, ST Feb. 92, p341-358.

Stochastic Modeling of Short Fiber Reinforced Composites—A Review, Jamshid Mohammadi and Artur S. Kurzydlo, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p479-

Stresses in Open Section Fiber Reinforced Composite Beams Under Constant Shear Loading, Albert G. Zvar-ick and Thomas A. Cruse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1067-1070.

Unidirected Twined-Strand Composites and Their Uses, Charles E. Kaempen, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p346-559.

Fiber reinforced plastics
Behavior of Concrete-Graphite/Epoxy Sections in Composite Bridge Girders, F. Gordaninejad, M. Saiidi and N. Wehbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709.

1992), p696-709.

Bond Anchorage of Pretensioned FRP Tendon at Force Release, Antonio Nanni, Masaharu Tanigaki and Koichi Hasuo, ST Oct. 92, p2837-2854.

Bond Strength of Straight GFRP Rebars, S. Tao, M. R. Ehsani and H. Saadatmanesh, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p598-605.

rmiste, ed., 1992.), p398-605. Composites Performance in the Infrastructure, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p532-545.

of Deficiencies and Failures, Inomas D. White, ed., 1992), p532-545.

Experimental and Theoretical Study of Flexural Behavior of Polymer Fiber Reinforced, Cement-Treated Soils, Robert Liang, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1080-1091.

Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultruded Fiber-Reinforced Plastics Beams in Industrial Building Construction, Ethan A. Love and Tanongsak Bisamsin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584.

Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, I. Larralde, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654.

FRP-Reinforced Wood as Structural Material, Nikolaos Plevris and Thanasis C. Triantafillou, MT Aug. 92, p300-317.

p300-317.

Plevris and Thanasis C. Triantafillou, MT Aug. 92, p300-317.
Hybrid (FRP+Steel) Reinforcement for Concrete Structures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p655-665.
Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou, Nikolaos Plevris and Nikola Deskovic, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717.
Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou and Nikola Deskovic, ST May 92, p1270-1284.
Short-Term Behavior of Pultruded Fiber-Reinforced Plastic Frame, Ayman S. Mosallam and Lawrence C. Bank, ST July 92, p1937-1954.
Splice/Development Length Requirements for FRP Grids Used in the Structural Reinforcement of Concrete, Edwin R. Schmeckpeper and Charles H. Goodspeed, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p632-644.
Tests of Full-Size Pultrudded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.

Fiberglass
Composites Performance in the Infrastructure, Richard
E. Chambers, (Materials: Performance and Prevention
of Deficiencies and Failures, Thomas D. White, ed.,
1992), p532-545.

Fibers
Application of SMA Technology in Georgia, Robert
Ronald Collins and Steve Fernando Valdez, (Materials:
Performance and Prevention of Deficiencies and
Fallures, Thomas D. White, ed., 1992), p160-171.
Dynamic Response of Sand Reinforced with Randomly
Distributed Fibers, Mohamad H. Maher and Richard
D. Woods, GT July 90, p1116-1131.
Fiber Ropes for Ocean Engineering in the 21st Century,
John F. Flory, Henry A. McKenna and Mike R. Parney,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p934-947.
Fracture-Based Two-Way Debonding Model for Discontinuous Fibers in Elastic Matrix, Christopher K. Y.
Leung, EM Nov. 92, p2298-2318.

Moisture Effects on Flexural Performance of Wood Fiber-Cement Composites, Parviz Soroushian and Shashidhara Marikunte, MT Aug. 92, p275-291.

Field Investigations
Artificial Recharge Feasibility Evaluation by Field Investigation, Maury E. Ford, Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Scott Keys, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647.
CERF Cosponsors Lime Columns Field Study, NE Aug. 92, n5.

92, p5.

92, pp.
Design Implications of Measured Pressures and Strains in Silos, Geoffrey E. Blight, ST Oct. 92, p2729-2742.
Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, Hans J. Peterson and William R. Grout, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p516-522.

Search of Solutions, Mohammad Karamouz, ed., 1992), p516-322.
Field Measurements of Tracer Gas Transport Induced by Barometric Pumping, R. H. Nilson, W. B. McKinnis, P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Committee, 1992), p710-716.
Field Performance and Analysis of Steep Riprap, Guy Lefebvre, Karol Rohan, Mahrez Ben Belfadhel and Oscar Dascal, GT Sept. 92, p1431-1448.
Field Research Program for Unsaturated Flow and Transport Experimentation, V. C. Tidwell, C. A. Rautman and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p704-709.
Field Trip—Cleveland East Breakwater Inspection, Thomas J. Bender, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p70-272.
Hydrologic Investigation of the April, 1983 Flooding in New Orleans, Louisiana, Michael A. Ports, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p260-267.
Hyperconcentrated Sand-Water Mixture Flows over Erodible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1325.
Laboratory Simulations of Directionally Spread Shoaling Waves, Steve Elgar, R. T. Guza, M. H. Freilich and M.

92, p1508-1525.

Laboratory Simulations of Directionally Spread Shoaling Waves, Steve Eigar, R. T. Guza, M. H. Freilich and M. J. Briggs, WW Jan./Feb. 92, p87-103.

Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p77-90.

Plot-scale Field Experiment of Surface Hydrologic Processes with EOS implications, Charles A. Laymon, Emir J. Macari and Nicholas C. Costes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2082-2093.

Relating Crop-Yield Response to Water-Table Fluctua-tions, H. M. Kandil and L. S. Willardson, IR Jan./Feb. 92, p113-121.

Sediment Sampling Techdniques in Complex Environments, John J. Nocera, Gregory P. Matthews and Thomas M. Simmons, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p92-97.

Field tests
Aldicarb Transport in the Coastal Plain of N. C. C. L.
Munster, R. W. Skages, J. E. Parsons, R. O. Evans, J.
W. Gilliam and E. W. Harmsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424.
Application of SMA Technology in Georgia, Robert
Ronald Collins and Steve Fernando Valdez, (Materials:
Performance and Prevention of Deficiencies and
Failures, Thomas D. White, ed., 1992), p160-171.
Availability of Shear Strength Reduction Technique,
Tamotsu Matsui and Ka-Ching San, (Stability and Performance of Slopes and Embankments II, Raymond B.
Seed, ed. and Ross W. Boulanger, ed., 1992), p445-460.
Bridge Testing—A Surprise Every Time, Baidar Bakht
and Lealie G. Jaeger, ST May 90, p1370-1383.
Calibrating SHE Soil-Erosion Model for Different Land
Covers, J. M. Wicks, J. C. Bathurst and C. W. Johnson,
IR Sept./Oct. 92, p708-723.

Compaction Grout: Rheology vs. Effectiveness, James Warner, Grouting. Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p229-239.

Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29.

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

33.
Determination of Geotechnical Properties of Uranium Tailings, Antonio Santos, José M. Martínez and Juan Luis Santiago, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p175-191.
Development of a Gas-Liquid Reaction Injection System, Shunsuke Shimada, Masanori Ide and Hiromu Iwasa, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holiz, ed. and Ilan Juran, ed., 1992), p325-336.
The Disensois of Payement Ills. J. B. Metcalf (Materials:

Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p325-336.

The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures: Thomas D. White, ed., 1992), p65-79.

Dynamic Parameters Analysis of Piles, Xiao M. Zhu, Hsien P. Niu and Suo X. Zhang, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p224-240.

Effect of Tire Parameters on Pavement Damage and Load-Equivalency Factors, Peter E. Sebaaly and Nader Tabatabaee, TE Nov./Dec. 92, p805-819.

Engineering Properties and Potential Uses of By-Product Phosphygpysum, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p250-263.

Environmental Monitoring Plan for a Pilot Study Using Phosphogypsum as a Roadbed Material, Reid Lea. Adam Faschan and Marty Tittlebaum, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p128-139.

Evaluation of In Situ Effective Shear Modulus from Dispersion Measurements, Christos Vrettos and Bernd Prange, GT Oct. 90, p1581-1585.

Evaluation of Soil Water Sensors in Frozen Soils, John L. Nieber, John M. Baker and Egbert J. A. Spaans, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p168-181.

Field Analysis of Contaminated Sediments by Immunoassay, Deborah J. Mossman. Cynthia J. Baker. Robin D.

Field Analysis of Contaminated Sediments by Immunoas-say, Deborah J. Mossman, Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p110-

oy solutions, F. rierce Linaweaver, ed., 1992), p110115.
Field Evaluation of Strain Gauges in Asphalt Concrete
Pavements, Peter E. Sebaaly and Nader Tabatabaee,
(Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed.,
1992), p382-396.
Field Load Test on Full-Scale Reinforced Concrete
Frame, Tso-Chien Pan, Siu Tee Wong, Hee Kiat
Cheong and Kost Wai Phang, CF Aug. 92, p137-150.
Field Test of 72-in-Jiameter Cast-in-Place Nonreinforced Concrete Pipe, Curtiss W. Gilley, Lester H. Gabriel and Robert S. Standley, TE Jan-Feb. 92, p1-19.
Field Verification of a Wave-Induced Current Model,
Jane McKee Smith, (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan
Blumberg, ed., Ralph Cheng, ed. and Craig Swanson,
ed., 1992), p95-104.
Frictional Resistance of Overland Flow on Tropical
Turfed Slope, Yee-Meng Chiew and Soon-Keat Tan,
HY Jan. 92, p92-97.
Frontal Dynamics and Circulation of the Upper Layer of

HY Jan. 92, p92-97.

Frontal Dynamics and Circulation of the Upper Layer of a Fjordsystem with Complicated Topography, Harald Svendsen, Susanne R. Mikki and Lars G. Golmen, (Extuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, p252-267.

Improved Design Procedures for Vertically Loaded H-Piles in Sand, Harry M. Coyle and Ronald Ungaro, GT Mar. 91, p507-528.

Instrumenting the 'Y'. Carin L. Roberts. John E. Recon

Mar. 91, p507-528.
Instrumenting the 'Y', Carin L. Roberts, John E. Breen and Patrick M. Bachman, CE Nov. 92, p48-51.
Laboratory versus Nondestructive Testing for Pavement Design, William N. Houston, Michael S. Mamlouk and Rohan W. S. Perera, TE Mar./Apr. 92, p207-222.

Lessons Learned from Compacted Clay Liner, Bill R. Els-bury, David E. Daniel, Gregory A. Sraders and David C. Anderson, GT Nov. 90, p 1641-1660.

C. Anderson, O'I Nov. 90, p1041-1000.

Longitudinal Dispersion Coefficients in Estuary, I. Guymer and J. R. West, HY May 92, p718-734.

Merging Field & Laboratory Bridge Scour Data, J. Sterling Jones, Peggy A. Johnson and Arthur C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1100-1105.

Microorganism Survival in Ice-Covered Marine Environ-ment, S. J. Stanley, D. W. Smith and G. D. Milne, CR June 92, p58-72.

On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p95-115.

On the Fatigue Loading for Local Components, Akhilesh Chandra Agarwal, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed.,

1992), p583-586.

Performance of Viaduct Girders under Static and Dynamic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Pilot Test Vaporizes Hazwaste, CE Nov. 92, p10.

Prediction of Natural Channel Hydraulic Roughness, Siddig E. Ahmed and Mohammed B. Saad, IR July/Aug. 92, p632-639.

Prestressed-Concrete Railway-Bridge Live-Load Strains, John F. Muller and Peter F. Dux, ST Feb. 92, p359-

376.

Proposed Sealing Field Tests for a Potential High-Level Radioactive Waste Repository in Unsaturated Tuff, Joseph A. Fernandez, John B. Case and Joseph Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2290-2297.

Pullout Tests Using Steel Grid Reinforcements with Low-Quality Backfill, Dennes T. Bergado, Kam-Hung Lo, Jin-Chun Chai, Ramaiah Shivashankar, Marolo C. Alfaro and Loren R. Anderson, GT July 92, p.1047-1063.

Recent Advances in Compaction Grouting Technology, James Warner, Norbert Schmidt, John Reed, Don Shepardson, Russ Lamb and Sam Wong, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p252-264.

Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

p491-505.

p491-505.

Seasonal Monitoring of Pavements—A Whole Lot More, Cheryl Allen Richter, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p182-195.

Seasonal Soil Strength by Spectral Analysis of Surface Waves, Bernard D. Alkire, CR Mar, 92, p22-38.

Sediment Management with Submerged Vanes. II: Applications, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

Soilcrete Cut-Off Wall for Undercrossing a Busy Rail Line, Walter Steiner, Ernst Schneider and Manfred Cartus, Geouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p384-397.

Glenn A. Hazen and John O. Hurd, ST Dec. 92, p3297-3314.

p3297-3314.
subsurface Characterization and Design of an Ash Landfill on Varved Clays, Siamac Vaghar, Stanley M. Bemben and Markus Walbaum, (Stability and Performance
of Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p788-803.
Successful High Traffic Chip Seal Construction, Scott
Shuler, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),
188-205.

p180-203.
Temporary Tunnel Excavation Support by Chemical Grouting, Francis B. Gularte, Gary E. Taylor and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p423-435.
Thin "Whitetop' Pavement Lives 30 Years in One, CE

Truck Loading Data for a Probabilistic Bridge Live Load Model, Dan M. Frangopol, George G. Goble and Nu-rhan Tan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-

Ultrafine Cement Tests and Dam Test Grouting, William J. Clarke, Millard D. Boyd and Maan Helal, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992).

p626-638.

Unified Approach to Ground Improvement by Heavy Tamping, Kwang Wei Lo, Peng Lee Ooi and Seng-Lip Lee, GT Mar. 90, p514-527.

Variability in Compaction Control, Iraj Noorany, GT July 90, p1132-1136.

Versatile Imaging System Assesses Hazwaste Sites, CE Oct. 92, p15. Walking of Flatwork on Expansive Soils, Robert W. Day, CF Feb. 92, p52-57

Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771.

Working Conditions of Sprinkler to Optimize Applica-tion of Water, José Mari Tarjuelo Martín-Benito, Manuel Valiente Gómez and Juan Lozoya Pardo, IR Nov./Dec. 92, p895-913.

ent wound materials

Unidirected Twined-Strand Composites and Their Uses, Charles E. Kaempen, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p546-559.

Bay Ridge, Anne Arundel County, Maryland Offshore Breakwater and Beach Fill Design, Edward T. Fulford and Kenneth M. Usab, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p205-220.

72. Steven A. Hughes, ed., 1992b, p205-220.
Coastal Processes and Engineering on a Micronesian Fringing Reef, Stanley J. Boc, Jr., William J. Reynold and Jasmina M. Dobinchick, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p285-302.
Deformation of Fill Slopes Caused by Wetting, Iral Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257.

Estimating Thaw-Strain Settlement of Frozen Fill, G. Scott Crowther, CR Dec. 92, p152-159.

Scott Crowner, CR Dec. 3, p132-153.

Estimation of Chemical Grout Void Filling by Electrical Resistivity, Hideo Komine, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p372-383. Experience with Beach Fill Equilibration and Recom-

mended Design Guidelines, Erik J. Olsen, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p45-59.

Fill-Slope Failure and Repair, Robert W. Day, CF Aug. 92, p161-168. Hydrocompression Settlement of Deep Fills, Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, p1536-1548.

Long Term Behavior of Urban Fill Embankments, J. David Rogers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1258-1273.

Monumental Task, Victor Omelchenko, Thad Bergling, David J. Oleynik and Satish B. Shah, CE June 92, p60-

Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hult-gren, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p775-787.

Relative Compaction of Fill Having Oversize Particles, Robert W. Day, GT Oct. 89, p1487-1491. Review of Wetting-Induced Collapse in Compacted Soil, Evert C. Lawton, Richard J. Fragaszy and Mark D. Hetherington, GT Sept. 92, p1376-1394.

Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silverston and Mark Easley, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361.

Scrap Tires Used in Rubber-Modified Asphalt Pavement and Civil Engineering Applications, Michael Blumenthal and Joseph L. Zeibor, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p182-192.

1992, p182-1992.
Short Beach Nourishment Fill Performance on an Irregular Coatline, Douglas W. Mann, Lamont W. Curtis and Thomas H. Daniel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119.
Softening of Fill Slopes Due to Moisture Infiltration, Robert W. Day and Gregory W. Axten, GT Sept. 90,

p1424-1427

p1424-1427.

Swell versus Saturation for Compacted Clay, Robert W.
Day, GT Aug, 92, p1272-1278.

Utilization of Carbide Lime Waste in Asphaltic Concrete
Mixes, Mohammed H. Al-Sayed, Ismail M. Madany
and W. Al-Khaja, (Utilization of Waste Materials in
Civil Engineering Construction, Hilary I. Inyang, ed.
and Kenneth L. Bergeson, ed., 1992), p230-239.

Utilization of Carbide Lime Waste in Cement Mortar
Mixes, Waheeb A. Al-Khaja, Ismail M. Madany and
Mohammed H. Al-Sayed, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang,
ed. and Kenneth L. Bergeson, ed., 1992), p320-331.

Variability in Compaction Control, 1raj Nocaron, GT
July 90, p1132-1136.

Wanaque Filtration Plant Subgrade Stabilization—A Case History, Joseph D. Chastanet and Paul M. Blakita, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p265-274.

Appropriate Use of Deep-Bed Filtration Models, C. S. P. Ojha and N. J. D. Graham, EE Nov./Dec. 92, p964-980.

Basic Properties of Sand and Gravel Filters (Paper intro-duced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p366-383.

Gritical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dams James L. Sherard Contribu-tions, Sukhanander Singh, ed., 1992), p533-554.

tions, Sukhanander Singh, ed., 1992), p533-554.

Filters and Leakage Control in Embankment Dams (Paper introduced by Lorn P. Dunnigan), James L. Sherard and Lorn P. Dunnigan, (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p411-441.

Filters for Silts and Clays (Paper introduced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p384-402.

Pinhole Test for Identifying Dispersive Soils (Paper intro-duced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, (Em-bankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284.

Sukhanander Singh, ed., 1992), p267-284.
Sinkholes in Dams of Coarse, Broadly Graded Soils (Paper introduced by Jean Lafleur), James L. Sherard, (Embankment Dants—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p312-323.
Some Engineering Problems with Dispersive Clays (Paper introduced by Lorn P. Dunnigan), J. L. Sherard, L. P. Dunnigan and R. S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p301-311.

Stabilizing Drop Structure by Drainage Modifications, Larry D. Armer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p39-44.

Velocity Gradient in Filter Backwashing, Mustafa Turan, EE Sept./Oct. 92, p776-790.

Appropriate Use of Deep-Bed Filtration Models, C. S. P. Ojha and N. J. D. Graham, EE Nov/Dec. 92, p964-

Effects of Pre-Oxidation on In-Line Filtration: Particle and Manganese Removal, John E. Tobiason and Nagaraju K. Vinod, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p520-525.

Light-Scatter Particle Counting: Improving Filtered-Water Quality, Carrie M. Lewis and David H. Manz, EE Mar./Apr. 91, p209-223.

Phosphorus Removal by Automatic Backwash Filters at Back River WWTP, George G. Balog, Manu A. Paate, Thomas N. Lash and Christian Davies-Venn, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p24-29.

Remaining Technical Barriers to Obtain General Acceptable.

1992), p24-29.

Remaining Technical Barriers to Obtain General Acceptance of Geosynthetics, Robert M. Koerner, Yick Hsuan and Arthur E. Lord, Jr., (Grouling, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p63-109.

Synchrotron Radiation Measurements of Degree of Saturation in Porous Matrix, Scott A. Wells and Richard I. Dick, EM Aug. 92, p1738-1744.

Finance
Planning and Design Guidelines for Small Craft Harbors—Economics and Finance, ASCE Ports and Harbors Task Committee (Paper Prepared by Lawrence E.
Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports
'92, David Torseth, ed., 1992), p1152-1183.
Small Systems Struggle, John Prendergast, CE Jan. 92,
p40-43.

Financial analysis Financial Performance Analysis for Construction Indus-try, Roozebeh Kangari, Foad Farid and Hesham M. El-gharib, CO June 92, p349-361.

Financial incentive programs
Financial Incentive Programs for Average-Size Construction Firm, Roger W. Liska and Bill Snell, CO Dec. 92,

Strategies in Risk Management of On-Demand Guaran-tees, Robert L. K. Tiong, CO June 92, p229-243.

Financial management
A New Fast Track for Public Works, Bill Hirsh, CE Feb.
92, p45-47.
Setcling Financial Management Software, Sharon
O'Donnell, CC July 92, p14.

Financing
Affordable Financing—The Crux of Affordable Housing,
Rodolfo J. Aguilar, (Housing America in the TwentyFirst Century, Mehmet Inan, ed., 1992), p75-81.
Application of Large Infrastructure Project Financing to
Construction Projects in Space, Michel Lyonnet du
Moutier and Patrick Cohendet, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992),
p2196-2207.

Capturing Capital, Paul J. Zofnass, CE May 92, p67-69. Critical Elements of Development Impact-Fee Programs, Arthur C. Nelson, James C. Nicholas and Julian C. Juergensmeyer, UP May 90, p34-47.

Juergensmeyer, UP May 90, p34-47.
Future Concerns in Environmental Engineering Graduate Education, Richard G. Luthy, David A. Bella, James R. Hunt, James H. Johnson, Desmond F. Lawler, Charles R. O'Melia and Frederick G. Pohland, El Oct. 92, p361-380.

p361-380.

Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992, 0-87262-898-1, 127pp.

Impact Fees: Practical Guide for Calculation and Implementation, Dennis H. Ross and Scott Ian Thorpe, UP Sept. 92, p106-118.

Life in the Fast Track, Richard L. Ridings and Stephen B. Quinn, CE Apr. 92, p46-49.

Rehabilitation of Infrastructure in Infill Sites, Stephen Sussna, El Oct. 92, p381-387.

Texas High-Speed Rail Inches Along, CE May 92, p20.

Texas High-Speed Rail Inches Along, CE May 92, p.20. Finegrained soils
3-D Effects of Incipient Fluidization of Fine Sands in Unbounded Domains, Gerard P. Lennon, William MacNair, Richard N. Weisman and Jeffrey Lindley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p654-659. Filters for Silts and Clays (Paper introduced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dans—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), n384-402.

Fine Ottawa Sand: Experimental Behavior and Theoreti-cal Predictions, Panos Dakoulas and Yuanhui Sun, GT Dec. 92, p1906-1923.

Hydraulic Properties of a Fine-Grained Soil Under Vari-ous Capillary Pressures and Loadings, Aladdin Shaikh and John D. Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p648-

633, Revised Cam-Clay Model, B. R. Srinivasa Murthy, A. Vatsala and T. S. Nagaraj, GT June 91, p851-871. Technique for Using Fine-Grained Soil in Reinforced Earth, A. Sridharan, B. R. Srinivasa Murthy, Bindumadhava and K. Revamasiddappa, GT Aug. 91, p1174-1190.

rmeability of Roller Compacted Concrete, Nemkumar Banthia, Michel Pigeon, Jaques Marchand and Jean Boisvert, MT Feb. 92, p27-40.

BOISVET, MIT FEU. 74, participant of Fine Sands in Unbounded Domains, Gerard P. Lennon, William MacNair, Richard N. Weisman and Jeffrey Lindley, (Hydraulic Engineering Saving a Threatened Resource—In Sarrof of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p654-659.

G. Bhowmik, ed., 1992), p654-659.
Approximation of Convective Processes by Cyclic AOI Methods, Guus S. Stelling and Jan J. Leendertse, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p771-782. Combined Natural Convection and Surface Radiation in the Annular Region Between a Volumetrically Heated Inner Tube and a Finite Conducting Outer Tube, S. E. Gianoulakis and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p805-812. Computation Method for Regulating Unsteady Flow in

Management Program Committee, 1992), p805-812. Computation Method for Regulating Unsteady Flow in Open Channels, Fubo Liu, Jan Feyen and Jean Berlamont, IR Sept./Oct. 92, p674-689. Development of the San Fernando Basin Groundwater Flow Model, Shih-Huang Chieh, Kelli A. Shuter and Melih M. Ozbilgin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p248-253.

Elastic Buckling Coefficients for Long, Unstiffened Plates, Julie Mark Cohen, EM Dec. 92, p2491-2496.

Modeling Channel Bed Transients Using Explicit F-D Schemes, B. Morse and R. D. Townsend, HY Nov. 90, p1345-1356.

Modified Vlasov Model for Beams on Elastic Founda-tions, C. V. Girija Vallabhan and Y. C. Das, GT June 91, p956-966.

Pseudo-Simulation Method for Stochastic Problems, B. A. Zeldin and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p37-40.

Side Weir in Triangular Channel, Ali Uyumaz, IR Nov. J Dec. 92, p965-970. Stochastic Mixed Finite Difference Method, P. D. Spanos and B. A. Zeldin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p804-9078.

Three-Dimensional Characteristics Model of Wind-Generated Turbulent Flow, Panayis-Fokion Matsoukis and Aristotelis Papadopolis-Dezorzis, EM Aug. 92, p1526-1545.

pl 12-6-13-9.

A Three-Dimensional Tidal Circulation Model Based on Semi-Implicit Finite-Difference Methods, Ralph T. Cheng and Vincenzo Casulli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 9428-429.

Two-Dimensional Leachate Estimation through Land-fills, Shabbir Ahmed, Reza M. Khanbilvardi, John Fil-los and Phillip J. Gleason, HY Feb. 92, p306-322.

### Finite differences

Application of a Boundary Fitted Coordinate Mass Transport Model, Daniel L. Mendelsohn and J. Crais Swanson, (Estuarine and Coassal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),

Axisymmetric General Shells and Jointed Shells of Revo-lution, Pei Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

Dynamic Analysis of Elastoplastic Softening Discretized Structures, C. Comi, A. Corigliano and G. Maier, EM Dec. 92, p2352-2375.

Evaluation of Dewatering and Treatment System at the Chisman Creek Superfund Site, Precha Yodnane, Den-nis W. Okorn and Burton M. Marshall, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p250-255.

A Graphical Post-Processor for CE-QUAL-W2, Paul M. Craig, Kenneth C. Black and Robert E. Yager, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p61-71.

The Hopscotch Algorithm for Three-Dimensiona lation, Geneviève Ségol, HY Mar. 92, p385-406.

Hydrodynamic Furrow Irrigation Model with Specified Space Steps, E. Bautista and W. W. Wallender, IR May/June 92, p460-465.

may/June 74, paeto-465.
Modeling the Salinity "History" of Great Egg Harbor
Bay, New Jersey, Bryan Pearce, Howard McIlvaine, Ed
Simek, Pete Sucsy and Vibbu Vivek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed., and Nani G.
Bhowmik, ed., 1992), p959-964.

Bhowmik, ed., 1992), p959-964.
Numerical Simulation of Tidal Flow in Shallow Water
Bay by Finite Difference Method, Xiaoyong Zhan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding,
ed., Keith Bedford, ed., Alan Blumberg, ed., Kalph
Cheng, ed. and Craig Swanson, ed., 1992), p684-693.
Passive Dispersive Transport Modelling: Comparison
with Experimental Rhodamine Data in the Elbe Estuary, Germany, Joachim Krohn, (Estuarine and Coastal
Modeling, Malcolm L. Spaulding, ed., Keith Bedford,
ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p127-139.
Seismic Wave Propagation by Finite Differences on the

Seismic Wave Propagation by Finite Differences on the Connection Machine, Jacek Myczkowski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p115-118.

NIGURECK, ed., 1992), p115-118.

Semi-Implicit Finite Difference Model for ThreeDimensional Tidal Circulation, Vincenzo Casulli and
Ralph T. Cheng, Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan
Blumberg, ed., Ralph Cheng, ed. and Craig Swanson,
ed., 1992), p620-631.

ett., 1972), polo-031.

de St. Venant Modelling in the Irrigation Environment,
Ehab A. Meselhe and Forrest M. Holly, Jr., (Hydraulic
Engineering: Saving a Threatened Resource—In Search
of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p.1124-1129.

Strategies for Groundwater Model Application Through GIS, David S. Ward, Robert M. Greenwald and P. Srinivasan, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p32.

# Finite element method

2-D Evaporation and Root Extraction in an FEM, Richard G. Allen and Wigdan I. Ahmad, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p189-196.

Adaptive and Parallel Methods for Nonlinear Solid Mechanics, T. Belytschko, L. P. Bindeman, H. Y. Chiang, E. J. Plaskacz and I. S. Yeh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p27-41.

Analysis and Implementation of Thin-Layer Element for Interfaces and Joints, K. G. Sharma and C. S. Desai, EM Dec. 92, p2442-2462.

Analysis of Buildings Using Strain-Based Element with Rotational DOFs, A. K. H. Kwan, ST May 92, pl 191-

Analysis of Delamination of Post-Tensioned Silos, Judith J. Stalmaker and Mark D. Fugler, ST Apr. 92, p1014-1022.

Analysis of Laterally Loaded Shafts in Rock, John P. Carter and Fred H. Kulhawy, GT June 92, p839-855.

Analysis of Performance of Pile Groups Adjacent to Deep Excavation, Richard J. Finno, Samir A. Lawrence, Na-bil F. Allawh and Indra S. Harahap, GT June 91, p934-955.

Analysis of Welded Tubular Connections Using Continu-um Damage Mechanics, William F. Cofer and Jihad S. Jubran, ST Mar. 92, p828-845.

Availability of Shear Strength Reduction Technique, Tamotsu Matsui and Ka-Ching San, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p445-460. Behavior of Concrete Hollow-Block Masonry Prisms under Axial Compression, T. P. Ganesan and K. Ramamurthy, ST July 92, p1751-1769.

Bond Anchorage of Pretensioned FRP Tendon at Force Release, Antonio Nanni, Masaharu Tanigaki and Koi-chi Hasuo, ST Oct. 92, p2837-2854.

Characteristic Dissipative Galerkin Scheme for Open-Channel Flow, F. E. Hicks and P. M. Steffler, HY Feb. 92, p337-352.

Compression Failure of Quasibrittle Material: Nonlocal Microplane Model, Zdenek P. Bazant and Josko Ožbolt, EM Mar. 92, p540-556.

Ozzout, Est Mair. 22, D3-050.
Computational Framework for 3D Nonlinear Discrete Crack Analysis, V. E. Saouma, R. W. Reich and J. Cervenka, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p788-791.

Computed Versus Observed Seismic Response and Damage of Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1804-1821.

Michael N. Fardis, ST July 92, p1804-1821.

Constitutive Modeling for Material with Perfect Disordered Heterogeneity, X. Lee and C. S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p445-448.

A Coordinate Reduction Technique With Mass Correction for Dynamic Analysis of Structural Systems, Wenlung Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p61-64.

Correction Criteria of Finite Element Modeling in Structural Dynamics, M. Tong, Z. Liang and G. C. Lee, EM Apr. 92, p663-682.

Critical Buckling Load Statistics of an Uncertain Col-

Critical Buckling Load Statistics of an Uncertain Col-umn, Garrett D. Jeong, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), 953-566.

1992), p563-566. Critical Issues Related to a Combined Probabilistic Numerical Analysis of Contaminant Transport in Porous Media, Jeffrey D. Cawfifield and Ming-Chee Wu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p232-235.
Cylindrical Shell Redessing by Large Admissible Perturbations, Basem Alzahabi and Michael M. Bernitsas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p200-203.

Data Abstraction in Engineering Software Development, John W. Baugh, Jr. and Daniel R. Rehak, CP July 92, p282-301.

Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257.

Design Cable-stayed Bridge for Cost Effectiveness and Safety, Jih-Jiang Chyu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992),

Design of Piles in Permafrost Under Combined Lateral and Axial Load, A. Foriero and B. Ladanyi, CR Sept. 91, p89-105.

Design of Tied-Back Walls for Seismic Loading, Thomas J. Siller and Matthew O. Dolly, GT Nov. 92, p1804-

Driving Characteristics of Open-Toe Piles in Dense Sand, Richard D. Raines, Oscar G. Ugaz and Michael W. O'Neill, GT Jan. 92, p72-88.

Dynamic Response Analysis of Reinforced-Soil Retaining Wall, Muthucumarasamy Yogendrakumar, Richard J. Bathurst and W. D. Liam Finn, GT Aug. 92, p1158-

Eigenproperties of a Twisted, Nonuniform Rotating Beam by the Finite Element Method, Alan G. Hernried and Wei-Ming Bian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p924-

Empirical Estimation of Double-Layer Repulsive Force between Two Inclined Clay Particles of Finite Length, Ning Lu and A. Anandarajah, GT Apr. 92, p628-634.

An Expert System for Impeller Mechanical Design and Analysis, Wen Jeng Chen and Hong-Tsung Lin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p936-939.

Extended Kalman Filter-Finite Element for Geotechnical Problems, Masaru Hoshiya and Atsushi Sutoh, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p128-131.

itability, Y. L. Lin, ed., 1992), p128-131.
FE Analysis of Time-Dependent Instability of Cut Slopes in Clay Shale, Nobuyuki Yoshida and Toshihisa Adachi, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p429-444.
FEM Modeling of Fictitious Crack Propagation in Concrete, Walter H. Gerstle and Ming Xie, EM Feb. 92, p416-434.

p416-434.

Finite Element Analysis and Design of Bridges in a Distributed Computing Environment, C. A. Hudson and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p671-678.

Finite Element Analysis in Geotechnical Engineering, Jonathan D. Bray, Ross W. Boulanger, Soon Hue Chew and Raymond B. Seed, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417.

Finite Element Analysis of a Geograf Reinforced Soil

Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417.

Finite Element Analysis of a Geogrid Reinforced Soil Wall, Richard J. Bathurst, Rajagopal Karpurapu and Peter M. Jarrett, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1213-1224.

Finite Element Analysis of Cold Embedments in Fresh Concrete, Daniel P. Swift, Jay A. Puckett and Thomas V. Edgar, CR June 92, p41-57.

Finite Element Analysis of Thin-Walled Curved Beams Made of Composites, G. S. Palani and Sundaramoorthy Rajasekaran, ST Aug 92, p2039-2062.

Finite Element Modeling of Single-Solute Activated-Carbon Adsorption, M. Akram Hossain and David R. Yonge, EE Mar./Apr. 92, p238-252.

Finite Element Modeling of Storm Water Runoff Using GRASS GIS, Baxter E. Vieux and James Westervelt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p712-718.

Finite Element-Based Flutter Analysis of Cable-Suspended Bridges, Ahmad Namini, Pedro Albrecht and Harold Bosch, ST June 92, p1509-1526.

Finite/Macroelement Meshes in Neural Rat Growth, Mater E. Vetaktomer Step 1 and Part Patrick.

Finite/Macroelement Meshes in Neural Rat Growth, Mona E. McAlarney, Letty Moss-Salentijn, Melvin L. Moss and Manjit Basra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p960-963.

Generalized Isoparametric Coordinate Determination Scheme for Finite Element Mesh Generation, Victor N. Kaliakin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p928-931.

Incorporating Load Sharing in Shear Wall Design of Light-Frame Structures, Bohumil Kasal and Robert J. Leicht, ST Dec. 92, p3350-3361.

Leicht, ST Dec. 92, p.3330-3361.
In-Plane Non-Linear Random Vibration of Composite Plates, Ronald S. Harichandran and Ahmad Hawwari, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p188-191.
Interslice Force Functions for Limit Equilibrium Analysis, Harianto Rahardjo, Delwyn G. Fredlund and Ken K. Fan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p325-341.

Inverse Problems in Biomechanics, Utpal Roy and Gau-tam Ray, *Engineering Mechanics*, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p980-983.

Knowledge-Based Systems in Structural Engineering in Germany, Nikolaus Fleischmann and Martina Schnel-lenbach, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p558-565.

LAN Ho! Structural Analysis on a Network, Suresh K. Sharma and John W. Baudh, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 6319-646.

Live-Load Moments for Continuous Skew Bridges, Mohammad A. Khaleel and Rafik Y. Itani, ST Sept. 90,

Macromodeling of Complex Composites, P. K. Basu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1071-1074.

Mesh Generation for Estuarine Flow Modeling, Norman L. Jones and David R. Richards, WW Nov./Dec. 92, p599-614.

Method for Simulating Tension Performance of Lumber Members, Steven M. Cramer and William B. Fohrell, ST Oct. 90, p2729-2746.

Microplane Model for Cyclic Triaxial Behavior of Con-crete, Jolko Ožbolt and Zdeněk P. Bažant, EM July 92.

p1365-1386.

pi305-1300.

Minimal Storage Finite Element Solution of Large-Scale Three-Dimensional Elastodynamic Problems, S. Hassanzadeh, S. Foresti, H. Murakami and V. Sonnad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p762-769.

Modal and Response Analyses of a Paper Machine Foundation, Jerry Chen and J. A. Bohinsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p574-581.

Modeling Horizontally Nail-Laminated Beams, David R. Bohnboff, ST May 92, pl 393-1406.

Motion Response and Wave Attenuation of Linked Floating Breakwaters, Iraklis A. Valioulis, WW Sept./Oct.

Multivariable Analysis Using Isoparametric Finite Elements, Ping Wang and William K. Rule, EM Aug. 92, p1730-1737.

Nondestructive and Destructive Testing of a Three Span Skewed R. C. Slab Bridge, R. A. Miller, A. E. Aktan and B. M. Shahrooz, (Nondestructive Testing of Con-crete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p150-161.

Stein Sture, ed., 1992), p130-101.

Nonlinear Eigeusolver for Exact Vibration Analysis, H. A. Smith, D. C. Sorensen and R. K. Singh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p920-923.

Nonlinear Finite-Element Model for Light-Frame Stud Walls, B. Kasal and R. J. Leichti, ST Nov. 92, p3122-

3135. Nonlinear Stability Analysis of Steel Members by Finite Element Method, Zuyan Shen and Qilin Zhang, EM Mar. 92, p445-461. Numerical Analysis of Discrete Nonlinear Fracture Mechanics, Walter H. Gerstle and Ming Xie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p784-787.

Niedzwecki, ed., 1992), p784-787.
Numerical Implementation of Nonlocal Elastoplastic Damage Theory, H. Murakami and H. E. Read, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p248-251.
Numerical Integration of Transient Creep Constitutive Equations for Polycrystalline Ice, S. Shyam Sunder, Alex A. Elvin and S. Nanthikesan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p429-432.

chanics, Loren D. Luces, etc. and John F. Abdamer, ed., 1992), p429-432. Numerical Modeling of Proposed Kawaihae Harbor, Hl, Linda S. Lillycrop and Stanley J. Boc, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992), neering Practice p412-424.

ps 12-224.
Numerical Solution of the Transient Fokker-Planck
Equation: The Movie, L. A. Bergman and B. F. Spencer, Jr., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p519-522.
Numerical Study of Soil Anisotropy, A. Anandarajah, EM
Jan. 92, p211-216.

On Distributed Processing Applications in Finite Element Analysis, Edward J. Plaskacz, Martin R. Ramirez and Sanjeev Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p107-110

110.
Open Boundary Condition for Multiple Level FE Tidal Current Flow Analysis, Toshio Kodama and Mutsuto Kawahara, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p442-447.
Out-of-Plane Streagths of Steel Beams, S. Bild, G. Chen and N. S. Trahair, ST Aug. 92, p1987-2003.
Parallelization of Linear Finite Element Analysis, Gwolong Lai and Hsin-Chu Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p655-662.
Plates on Elastic Foundation. David S. Chilton and Jerry

Plates on Elastic Foundation, David S. Chilton and Jerzy W. Wekezer, ST Nov. 90, p3236-3241.

Predicting the Performance Limits of Soil-Culvert Sys-tems, Yahia E. -A. Mohamedzein, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911

Pre-Test Selection of Static Force and Displacement Measurement Locations for Damage Assessment, Massoud Sanayei, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p567-570.

Prying and Shear in End-Plate Connection Design, Cam-eron P. Chasten, Le-Wu Lu and George C. Driscoll, ST May 92, p1295-1311.

Pseudo-Simulation Method for Stochastic Problems, B. A. Zeldin and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p37-40.

andom Response of Multicrystalline Structures, Dariush Mirfendereski and Armen Der Kiureghian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p800-803. Random

M. Niedzwecki, ed., 1992), p800-803.
Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.
Reliability-Based Optimization Using Sequential Quadratic Programming, Sankaran Mahadevan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p543-546.
Seismic Response of Multianchored Retaining Walls, Thomas J. Siller and Dorothy D. Frawley, GT Nov. 92, p1787-1803.

Shear-Stress Distribution in Symmetrically Tapered Cantilever Beam, Edwin P. Russo and Gregory Garic, ST Nov. 92, p3243-3249.

Simple Procedure for Determining Cap-Plasticity-Model Parameters, Tien-Kuen Huang and Wai-Fah Chen, GT Mar. 90, p492-513.

Solving Turbulent Flows Using Finite Elements, John I. Finnie and Roland W. Jeppson, HY Nov. 91, p1513-

State-of-the-Art: Static Stability and Deformation Analysis, J. Michael Duncan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p222-266.

and ROSS W. DOURINGT, CO., 1992.), PZZZ-ZO.
Stochastic FEM Based on Local Averages of Random Vector Fields, W. Q. Zhu, Y. J. Ren and W. Q. Wu, EM Mar. 92, p496-511.
Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p328-331.

Stochastic Mixed Finite Difference Method, P. D. Spanos and B. A. Zeldin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p804-

Stress Relaxation Analysis for Sealants, Chi-Ping Wang and Frank E. Weisgerber, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p240-243.

Structural Evaluation of Box Culverts, Shad M. Sargand, Glenn A. Hazen and John O. Hurd, ST Dec. 92, p3297-3314.

phermal Load for p-Version Laminated Elements, Pabi-tra K. Saha, Nesar U. Ahmed and Gautam Saha, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1059-1062.

Nieuzwecki, ed., 1992, p. 103-1062.

Thermal-Structural Analysis Methods for RCC Dams, P.
R. Barrett, H. Foadian, R. J. James and Y. R. Rashid,
(Roller Compacted Concrete III, Kenneth D. Hansen,
ed. and Francis G. McLean, ed., 1992), p407-422.

Thin-Walled Space Frames. I: Large-Deformation Analysis Theory, Hong Chen and George E. Blandford, ST
Aug. 91, p2499-2520.

Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.

Two-Dimensional Flow in Embankments, Nazeer Ahmed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p636-641.

Variability Response Functions and Stochastic Field Dis-cretization in Stochastic Finite Element Methods, Tsuyoshi Takada, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p116-119.

Wave Propagation in Fluid Loaded Periodic Structures, Michael L. Accorsi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p212-

Wheel Load Distribution in I-Girder Highway Bridges, Kassim M. Tarhini and Gerald R. Frederick, ST May 92, p1285-1294.

Finite element

ratte elements
Antiplane Problems of Monoclinic Material, Chien-Ching
Ma, EM Sept. 92, p1765-1782.

Applying the ARMOS and MOFAT Models to a Major
Oil Spill, Otto J. Helweg, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p585-590.

Arc-Length Method for Passing Limit Points in Structural Calculation, W. F. Lam and C. T. Morley, ST Jan. 92,

Bolted Connections in Wood under Bending/Tension Loading, R. Davalos-Sotelo and P. J. Pellicane, ST Apr. 92, p999-1013.

92, p999-1013.

Buckling Analysis of Structures Composed of Tapered Members, Siu Lai Chan, ST July 90, p1893-1906.

Calculation of Total Conveyance in Natural Channels, J. Garbrecht and G. O. Brown, HY June 91, p788-798.

A Computer Program for the Analysis of Reinforced Soil, F. Reyna, D. Humphrey, B. Christopher and J. L. Chameau, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1225-1236.

Crack Band Based Model for FEM Analysis of Concrete Structures, Grzegorz Cajer and Peter F. Dux, ST June 90, p1696-1714.

Discrete Markov Process Approach to Fatigue Crack

Discrete Markov Process Approach to Fatigue Crack Growth, T. J. Enneking and B. F. Spencer, Jr., (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p792-795.

Dynamic Analysis of Elastoplastic Softening Discretized Structures, C. Comi, A. Corigliano and G. Maier, EM Dec. 92, p2352-2375.

Dec. 94, p.2532-2513.

Dynamic Analysis of Rigid Airport Pavements with Discontinuities, Anant R. Kukreti, Mohammad R. Taheri and Ragnar H. Ledesma, TE May/June 92, p341-360.

Dynamic Response of Beams on Elastic Foundation, Yew Chin Lai, Bing Yuan Ting, Woon-Sung Lee and Bryan R. Becker, ST Mar. 92, p833-858.

Elastonlattic, Nonlinese, Analysis, of Elevibly, Jointed

R. Becker, ST Mar. 92, p853-858.
Elastoplastic Nonlinear Analysis of Flexibly Jointed Space Frames, Faris G. A. Al-Bermani and Stritawat Kitipornchai, ST Jan. 92, p108-127.
An Elastoviscoplastic Model for High Strength Concrete, Tianxi Tang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1922), p856-859.
Evaluation of Modelling Parameters for Simulation of Estuarial Systems, Ian P. King, (Estuarine and Coastal Modelling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p707-719.
An Evaluation Study of Modified Mohr-Coulomb and

Swanson, etc., 1972, p. 1017-119.
An Evaluation Study of Modified Mohr-Coulomb and Cap Models, Hamdan N. Al-Ghamedy and Sahel N. Abduljauwad, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.717-

Exact Formulation of Axisymmetric-Interface-Element Stiffness Matrix, Zehong Yuan and Koon Meng Chua, GT Aug. 92, p1264-1271.

Failure Analysis of Masonry Structures, P. B. Shing, H. R. Lotfi, A. Barzegarmehrabi and J. Brunner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p780-783.

Niedzwecki, ed., 1992), p780-783.
Failure Criteria Interpretation Based on Mohr-Coulomb Friction, D. V. Griffiths, GT June 90, p986-999.
Finite Element Analysis of Slopes with Layer Reinforcement, Robert M. Ebeling, John F. Peters and Reed L. Mosher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1427-1443.
Finite Element Dynamic Reliability Analysis with Condensation, Sankaran Mahadevan and Sandeep Mehta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p332-335.

Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, Engineering Mechanica, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p912-915.

Finite Element Model for Seismic RC Coupled Walls Having Stender Coupling Beams, Omar Chaallal, ST Oct. 92, p2936-2943.

Oct. 74, p2430-2943.

A Finite Element Model for Three-Dimensional Flows Along the West Coast of Vancouver Island, M. G. G. Foreman, R. E. Thomson, D. R. Lynch and R. A. Walters, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p574-585.

ps) 4-363.

Finite Element Modeling of Concrete Expansion and Confinement, F. J. Vecchio, ST Sept. 92, p2390-2406.

Finite Element Simulation of Behavior of Laterally Loaded Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Frame Buckling Analysis with Full Consideration of Joint Compatibilities, Yeong-Bin Yang and Shyh-Rong Kuo, EM May 92, p871-889.

EM May 92, p871-889.
Free Boundary, Fluid Flow, and Seepage Forces in Excavations, Ronaldo I. Borja, GT Jan. 92, p125-146.
Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.
Improved Rectangular Element for Shear Deformable Plates, Puh-Gwo Yuan and Robert E. Miller, EM Feb. 92, p312-328.

-Plane Floor Deformations in RC Structures, Hassan S. Saffarini and Musa M. Oudaimat, ST Nov. 92, p3089-

Interactive Base-Isolation Foundation System: I. Finite Element Formulation, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2048-2058.

Interactive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.

Low-Order Interpolation Functions for Curved Beams, S. J. Pantazopoulou, EM Feb. 92, p329-350. Model Correction via Compatible Element Method, De-Wen Zhang and F. S. Wei, AS July 92, p337-346.

wen Zhang and F. S. Wei, AS JULY 94, 3937-346.
Modeling Stiffness Degradation in Filamentary Composite Materials, Robert M. Hackett and Kerry T. Slattery, MT May 92, p196-211.
Movement of Slopes During Rapid and Slow Drawdown, Ronaldo I. Borja and Sunil S. Kishnani, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404-

413. Necking of Creep-Cavitating Bars, C. H. Lu and A. J. Levy, EM Apr. 92, p746-762. New Spline Finite Element for Plate Bending, S. C. Fan and M. H. Luah, EM June 92, p1065-1082. Nonisothermal Viscoplasticity, Marc Benowitz and Maciej P. Bieniek, (Engineering Mechanics, Loren D. Luies, ed. and John M. Niedzwecki, ed., 1992), p244-247.

Nonlienar, Incremental Analysis of Olmsted Locks, Chris A. Merrill and Sharon B. Garmer, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p921-928.

1992], p921-928.
Nonlinear Geometric and Material Considerations in Shell Structures, S. A. Schimmels and A. N. Palazotto, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p548-551.
Numerical and Experimental Studies of Vibration of Impact Damaged SMC Composite Plates, Shive K. Chaturvedi and Pay-Jye Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1063-1066.
On the Resonne of Ferst Dama Subjected to Eastleanth.

1992), p1063-1066.
On the Response of Earth Dams Subjected to Earthquake Fault Rupture, Jonathan D. Bray, Raymond B. Seed and H. Bolton Seed, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p608-624.
On the Role of Dispersive Waves in Strain-Softening Media, L. J. Sluys and R. de Borst, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p624-627.

Optimal Discretization of Random Fields for SFEM, Chun-Ching Li and A. Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p29-32.

Y. K. Lin, ed., 1992), p29-32.
Parameter Estimation in Complex Linear Structures, M. R. Banan, M. Banan and K. D. Hjelmstad, (Probabilities Mechanics and Structural and Geotecknical Reliability, Y. K. Lin, ed., 1992), p571-574.
Performance of Test Embankment Constructed to Failure on Soft Marine Clay, B. Indraratna, A. S. Balasubramaniam and S. Balachandran, GT Jan. 92, p12-33.

Postbuckling Behavior of Stiffened Composite Shell Panels, S. Sridharan, A. Kasagi and M. Zeggane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p648-651.

Prebuckling Deflections and Lateral Buckling. I: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Appli-cations, Yong Lin Pi and N. S. Trahair, ST Nov. 92,

Predicting Effects of Subsidence on Landfill Caps, A. W. Bredariol, J. Larralde, J. P. Martin and C. A. Fiori, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p360-364.

cai Reliability, Y. K. Lin, ed., 1992), p360-364.
Relationships Between Error Estimation and Adaptive Computations in Strain Localization, D. Aubry and B. Tie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283.
Reliability of Geometrically Nonlinear PR Frames, Achintya Haldar and Yiguang Zhou, EM Oct. 92, p2148-2155.

p2148-2155.
Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p539-542.
Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, EM Aug. 92, p1661-1678.
Stochastic Finite and Boundary Elements, Gautam Dasgupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p932-935.
Stochastic Finite Elements and Reliability Analysis, Lucia Faravelli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p45-48.

p45-48

Straight, Single-Tapered Composite I-Beams of Ortho-tropic Materials, Robert J. Leichti and Chai H. Yoo, MT Nov. 92, p399-414.

Support Structures for High-Resolution Optical Systems, Ralph M. Richard and Daniel Vukobratovich, AS Jan. 92, p24-43.

Thin-Walled Multicell Box-Girder Finite Element, A. Ghani Razaqpur and Hangang Li, ST Oct. 91, p2953-

Three Dimensional Modeling of Watershed Hydrology, M. N. Saquib and M. L. Kavvas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p391-396.

Adamouz, ed., 1992), p.91-390.
Tide and Hurricane Storm Surge Computations for the Western North Atlantic and Gulf of Mexico, Joannes J. Westerink, Julia C. Muccino and Richard A. Luettich, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p538-550.

Tide and Storm Surge Predictions Using Finite Element Model, J. J. Westerink, R. A. Luettich, A. M. Baptista, N. W. Scheffner and P. Farrar, HY Oct. 92, p1373-1390.

Transition Plate-Bending Elements for Compatible Mesh Gradation, Chang-Koon Choi and Yong-Myung Park, EM Mar. 92, p462-480.

Ultrasonic Wave Scattering by a Crack in a Composite Plate, W. M. Karunasena, A. H. Shah and H. D. Mair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559.

Wave Propagation in a Nonlocal Strain-Softening Continuum, Gilles Pijaudier-Cabot and Antonio Huerta, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p620-623.

Finite strip method

Analysis of Cantilever Decks of Thin-Walled Box Girder Bridges, Shih Toh Chang and Jiang Zhi Gang, ST Sept. 90, p2410-2418. Finite-Strip Free-Vibration Analysis of Wood Floors, Filiatrault, B. Folz and R. O. Foschi, ST Aug. p2127-2142.

Finland

Site Investigation Equipment Developed by Teollisuuden Voima Oy, Henry Ahokas, Anti Öhberg, Heikki Hink-kanen and Pelkka Roubiainen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1092-1098.

Oakland Fire Fighters Guided by Satellites, CE Jan. 92,

Fire protecti

Berkeley Profs Seek Better Fire Protection for Offshore Platforms, NE Feb. 92, p16.

High-Temperature Properties of Fire-Resistant Steel for Buildings, Y. Sakumoto, T. Yamaguchi, M. Ohashi and H. Saito, ST Feb. 92, p392-407.

Structural Fire Protection (M&R No. 78), ASCE Committee on Fire Protection, Structural Division, American Society of Civil Engineers, (E. L. Schaffer, chmn.), 1992, 0-87262-888-4, 260pp.

Structural Fire Protection (M&R No. 78), ASCE Committee on Fire Protection, Structural Division, American Society of Civil Engineers, (E. L. Schaffer, chmn.), 1992, 0-87262-888-4, 260pp.

Fire resistant materials

Courts Set Aside Jury Verdict in FTR Plywood Case, Mi-chael C. Loulakis and William L. Cregger, CE May 92,

High-Temperature Properties of Fire-Resistant Steel for Buildings, Y. Sakumoto, T. Yamaguchi, M. Ohashi and H. Saito, ST Feb. 92, p392-407.

Structural Fire Protection (M&R No. 78), ASCE Committee on Fire Protection, Structural Division, American Society of Civil Engineers, (E. L. Schaffer, chmn.), 1992, 0-87262-888-4, 260pp.

High-Temperature Properties of Fire-Resistant Steel for Buildings, Y. Sakumoto, T. Yamaguchi, M. Ohashi and H. Saito, ST Feb. 92, p392-407.

Cleanup Efforts Continue at Oakland Fire Site, CE Feb. 92, p14.

Fish

Benthic Exchange of Toxic Contaminants, Steve C. McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik. ed., 1992), p386.

Are High and Low Flow Habitat Values Really the Same? Terry Waddle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p374-

Environmental Effects of Beaufort Sea Causeways, J. M. Colonell, B. J. Gallaway and A. W. Niedoroda, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974.

Highway Construction and a Trout Stream Relocation, James Seksinsky, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p413-

Integrated Assessment of Acid-Deposition Effects on Lake Acidification, Edward S. Rubin, Mitchell J. Small, Cary N. Bloyd and Max Henrion, EE Jan./Feb. 92, p120-134.

Pish management Dynamic Fish Growth Modeling for Tailwater Fishery Management, Ming Shiao, Gary Hauser, Gary Chapman, Bruce Yeager, Tom McDonough and Jim Ruane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 136-1141.

Flah protection

Energy Loss at Combining Pipe Junction, Marc Serre, A.

Jacob Odgaard and Rex A. Elder, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p766-771.

Innovative Intake Design for Raritan River, Paul Y.

Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p220-225.

Wave Barriers: An Environmentally Benign Alternative, Jeffrey F. Gilman and Dennis Nottingham, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p479-486.

p479-486.

Fish reproduction

Dynamic Fish Growth Modeling for Tailwater Fishery

Management, Ming Shiao, Gary Hauser, Gary Chapman, Bruce Yeager, Tom McDonough and Jim Ruane,

(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.

and Nani G. Bhowmik, ed., 1992), p1136-1141.

Global Climate Change Effects on Water Quality, G. K.

Meyer and G. T. Oriob, (Water Resources Planning and

Management: Saving a Threatened Resource—In

Search of Solutions, Mohammad Karamouz, ed., 1992),

p19-24.

Fish screens

Innovative Intake Design for Raritan River, Paul Y.
Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p220-225.

isheries

Fisherles
Dynamic Fish Growth Modeling for Tailwater Fishery
Management, Ming Shiao, Gary Hauser, Gary Chapman, Bruce Yeager, Tom McDonough and Jim Ruane,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p1136-1141.

Fishing
Alternative Study for the Breakwater and Fishing Pier
Rehabilitation at Playland Park, Rye, New York,
David W. Yang, Michael I. McCarthy, Edward J.
Schmeltz, Joseph Bonasia and Ralph Butler, Jr.,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p632-645.
Increasing Safety Downstream of Hydropower Facilities,
Stephen E. Draper, CF Nov. 91, p239-250.

Fixed objects
Free-Bending Fatigue Life Estimation of Cables at Points
of Fixity, Mohammed Raoof, EM Sept. 92, p1747-

Fixed structures

Fixed structures
Floating or Fixed Dock for RO/RO Ship Operations,
Bankim Mallick and Curtis L. Ratcliffe, (Ports '92,
David Torseth, ed., 1992), p709-722.
The Mother of All Resilient Structures: Fixed-Base Tower
in 3000-Foot Water and Some Outstanding Issues,
Peter W. Marshall, Susan L. Smoilinski and Denby G.
Morrison, (Civil Engineering in the Oceans V, Robert
T. Hudspeth, ed., 1992), p258-272.
Wave Exciting Forces on a Platform Fixed in Nonlinear
Shallow Water Waves, Gregory S. Hook, Cheung H.
Kim and Erick Huang, (Civil Engineering in the Oceans
V, Robert T. Hudspeth, ed., 1992), p311-325.

Fixed-end beams
Fixed-End Moments and Thrusts of Planar Curved
Beams, Tung-Ming Wang and Theodore F. Merrill, ST
Jan. 92, p324-331.

Stitch Spacing and End Fixity in Seismic-Resistant Boxed Angle Braces, Farhang Aslani and Subhash C. Goel, ST Oct. 92, p2872-2889.

Fjords
Frontal Dynamics and Circulation of the Upper Layer of a Fjordsystem with Complicated Topography, Haraid Svendsen, Susanne R. Mikki and Lars G. Golmen, (Estuarine and Coastal Modeling, Macloim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p252-267.

Flanges Formulas for Shear-Lag Effect of T-, and I-, and Box Beams, Qi-gen Song and Alexander C. Scordelis, ST May 90, p.1306-1318.

Flash floods Preferred Directions of Flow on Alluvial Fans, Richard H. French, HY July 92, p1002-1013.

Adding Up Admixtures, Paul Tarricone, CE May 92, p48-51.

p48-51.

Case Studies of Semi-Closed Pipeline Systems for Flexible Deliveries, John L. Merriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p468-473.

Climate Change and Water Management Flexibility, Linda L. Nash, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-522.

Flastic Analysis of Submarine Pipelines Prop. Harri

ed., 1992), p517-522.

Elastic Analysis of Submarine Pipelines, Poon-Hwei Chuang and David Lloyd Smith, ST Jan. 92, p90-107.

Flexibility by Multireference Impact Testing for Bridge Diagnostics, Madhwesh Raghavendrachar and Ahmet E. Aktan, ST Aug. 92, p2186-2203.

Flexible Membrane Wave Barrier, Gary O. Thompson, Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p129-148.

High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheinman, EM May 92, p1026-103.

Irrigation Project Modernization, H. Plusquellec and C. M. Burt, (Irrigation and Drainage: Saving a Threatment Resource—In Search of Solutions, Ted Engman, ed., 1992), p197-202.

1992, p197-202.
Nonlinear Impulsive Motions of Low-Tension Cables, Michael S. Triantafyllou and Christopher T. Howell, EM Apr. 92, p807-830.
Use of Pilot Projects for Technology Transfer in Developing Countries, John L. Merriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p238-243.

Flexible connections
Elastoplastic Nonlinear Analysis of Flexibly Jointed
Space Frames, Faris G. A. Al-Bermani and Strittawat
Kitipornchai, ST Jan. 92, p108-127.
Reliability of Nonlinear Frame Structures by SFEM,
Achintya Haldar and Yiguang Zhou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p336-339.
Short-Term Behavior of Pultruded Fiber-Reinforced
Plastic Frame, Ayman S. Mosallam and Lawrence C.
Bank, ST July 92, p1937-1954.
Tansient Analysis of Flexible Space Structures, D. L.
Rice and E. C. Ting, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadch, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p827-838.

Plexible pavements

Design Considerations for Multi-Wheel Aircraft, Walter R. Barker and Carlos R. Gonzalez, (International Airport, Robert E. Boyer, ed., 1992), p49-63.

Unified Pavement Distress Index for Managing Flexible Pavements, C. H. Juang and S. N. Amirkhanian, TE Sept./Oct. 92, p686-699.

Flexible pipes
Pipe Soil Stiffness Ratio Effect on Flexible Pipe Buckling
Threshold, Kenneth K. Kienow and Robert C. Prevost,
TE Mar./Apr. 89, p112-129.

Flexural strength
Compression Tests of Cold-Formed Steel Columns, C. C.
Weng and Teoman Pekoz, ST May 90, p1230-1246.
Design Method for Frozen-Soil Retaining Wall, Sweanum
Soo and B. B. Muvdi, CR June 92, p73-89.
Flexural Tensile Strength of Partially Grouted Concrete
Masonry, Ahmad A. Hamid, Omar A. Elnawawy and
Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393.

Analytical Moment-Curvature Relations for Tied Con-crete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544.

Bending of Rectangular Cross-Section Cantilever with Cylindrical Cutouts, A. K. Naghdi, EM Apr. 92, p831-842.

Suckling of Columns of Variable Flexural Rigidity, A. Siginer, EM Mar. 92, p640-643. Flexural Analysis of Reinforced Concrete Beams Containing Steel Fibers, Byung Hwan Oh, ST Oct. 92, p2821-2836.

Flexural and Shear Studies of Carbon Fiber Reinforced Beams, Paul Zia, Shuaib H. Ahmad, Rakesh K. Garg and Kristina Hanes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p884

Flexural-Torsional Stability of Thin-Walled Columns, Juha Paavola and Seppo Salonen, EM Dec. 92, p2384-2400.

Modeling Slab Contribution in Frame Connections, B. M. Shahrooz, S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494.

Sept. 92, p2475-2494.
Moisture Effects on Flexural Performance of Wood
Fiber-Cement Composites, Parviz Soroushian and
Shashidhara Marikunte, MT Aug. 92, p275-291.
Probabilistic Analysis of Post-Tensioned Steel Girder
Bridges, Sami W. Tabsh and Jack R. Kayser, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p13-16.
Support Structures for High-Resolution Optical Systems,
Ralph M. Richard and Daniel Vukobratovich, AS Jan.
92, p24-83.

92, p24-43.

Floating bodies

Dynamic Response of an Infinite Beam Supported by a Fluid, Z. G. Zhao and J. P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p341-344.

ed., 1992), p341-344.
Model for Transport of Floating Debris in the Ocean, Y.
C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.
Wind Effect on Oblique Motion of Two Bodies in a Uniform Flow, Allen T. Chwang and Ching-Jer Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p353-356.

Floating breakwaters

Motion Response and Wave Attenuation of Linked Float-ing Breakwaters, Iraklis A. Valioulis, WW Sept./Oct.

Floating docks Case Study—Elliott Bay Marina Floating Moorage, Craig S. Funston, (Ports '92, David Torseth, ed., 1992),

p263-274.

Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (Ports '92, David Torseth, ed., 1992), p275-287.

Floating or Fixed Dock for RO/RO Ship Operations, Bankim Mallick and Curtis L. Ratcliffe, (Ports '92, David Torseth, ed., 1992), p709-722.

Port of Portland's Berth 601 Floating Dock, Elmer W. Ozolin and Walter R. Haynes, (Ports '92, David Torseth, ed., 1992), p150-163.

U.S. Navy Deployable Waterfront Facility, Glenwood Bretz, Julio Giannotti and Arturo Calisto, (Ports '92, David Torseth, ed., 1992), p520-534.

oating structures

Floating structures
Measured and Simulated Response of a Small Semisubmersible Moored in Deep Water, Robert F. Zucck,
Stuart F. Pawsey and Steve J. Leverette, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed.,
1992), p114-128.
The SIMBAT Software Package for Stochastic Interpolation of Ocean Wave Kinematics as an Aid in the Engineering Design of Large Floating Structures, Loon
Borgman, David Shields, Robert Zucck and Warren
Bartel, (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p858-606.
Span Swap a Success, CE Nov. 92, p13.
U.S. Navy Deployable Waterfront Facility, Glenwood
Bretz, Julio Giannotti and Arturo Calisto, (Ports '92,
David Torseth, ed., 1992), p520-534.

Flocculating
Type II Sedimentation: Removal Efficiency from Column-Settling Tests, Ravindra M. Srivastava, EE May/
June 92, p438-441.

Flocculation Density Currents and Shear-Induced Flocculation in Sedimentation Tanks, D. A. Lyn, A. I. Stamou and W. Rodi, HY June 92, p849-867.
Determining Velocity Gradient in a Flocculation Basin—A Case Study, Christopher H. Yu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p593-598.

### Flood control

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066.

Calculation of Runoff from Rainfall Using "NURP" Data, Albert H. Halff, Henry M. Halff and Juan S. Ro-driguez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed.,

1992), p487-492

The Challenge of Kissimmee River Restoration, Stuart J. Appelbaum, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p696-701.

Construction on Wisconsin's Lake Michigan Coast, J. Philip Keillor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p762-778.

Design of Flood Protection for Transportation Alignments on Alluvial Fans, Richard H. French, IR Mar./ Apr. 92, p320-330.

Drownproofing of Low Overflow Structures, Hans J. Leu-theusser and Warren M. Birk, HY Feb. 91, p205-213.

Dry Creek Watershed Flood Control Plan: A Case Study, Eric S. Clyde, M. N. Saquib and Dennis J. Huff, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p287-292.

Ecuador—The Lower Guayas Flood Control and Drain-age Project—A Case Study, Peter Wittenberg and Wal-ter Ochs, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p275-280.

Flood Control Experiences in China and 1991 Flood Dis-aster, Daniel J. Gunaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p965-970.

Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jenning, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

Hillsboro Basin Surface Water Management Model, David P. Preusch, Jayantha Obeysekera, John M. Crouse and Kendrick Logsdon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Molammad Karamouz, ed., 1992), p810-816.

Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.

Implications of Design Uncertainty in Benefit-Cost Analysis, Anand Prakash, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p120-

International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teresa Bowen MacArthur, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p569-574.

Levee/Floodwall Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808.

Levels of Service Applied to Urban Streams, H. Rooney Malcom and Cynthia C. Lancaster, WR July/Aug. 91,

Modeling Flow and Flood-Plain Storage in a Tidally Affected River, A. G. Strickland and Jerad D. Bales, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1130-1135.

One-Dimensional River Flow Simulation with Particular Consideration of Ecology and Environment, E. Ritterbach, M. Schröder and G. Rouvé, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1142-1147.

Optimal Flood Warning Threshold: A Case Study in Con-nellsville, Pennsylvania, Duan Li, Yacov Y. Haimes, Eugene Stakhiv and David Moser, (Risk-Based Deci-sion Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283.

1992), p260-25.

Physical Modeling of a High Ve'ocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Jr. and Robert U. Castle, (Hydraulic Engineering: Soving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p618-623.

Preliminary Sizing of Detention Reservoirs to Reduce Peak Discharges, Bruce M. McEnroe, HY Nov. 92. p1540-1549.

Quantitative Risk Assessment and Technology Transfer: Software Developments, Charles Yoe, (Risk-Based De-cision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p92-107.

Retrofitting Storm Water Facilities for Quantity and Quality Control, Stuart G. Walesh, [Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, p786-791.

Revised Hydraulic Design of the Los Angeles County Flood Control System, Michael E. Mulvihill and Scot E. Stonestreet, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmit, ed., 1992), p612-

Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silverston and Mark Easley, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361.

Sizing Stormwater Detention Reservoirs to Reduce Peak Flows, Bruce M. McEnroe, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p719-724.

Stable Channel and Environmental Design Considera-tions for an Urban Flood Control Project, Edward F. Sing, Daniel Pridal and Thea Lane, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p464-469.

Structural and Non-Structural Alternatives for Accommodating Larger Floods at Dams, Louis E. Buck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1228-1233.

Successful Interactions Between Hydraulic Engineering and Geomorphology in Identifying Flood Hazard Areas in the Southwestern United States, Richard H. French and Jeffrey R. Keaton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

The Talbert Channel Ocean Outlet Project, Craig B. Leidersdorf, Kenneth E. Smith and Ruh-Ming Li, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p745-761.

Urban Development on Alluvial Fans, Lan-Yin Li Weber and Virginia Bax-Valentine, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p11-

Verification of an Alluvial Fan Drainage Design Methodology for Transportation Alignments, Syndi J. Flippin and Richard H. French, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p575-580.

Design-Basis Flood for Rehabilitation of Existing Dams, Anand Prakash, HY Feb. 92, p291-305.

An Evaluation of Highway Flood Damage Statistics, Jen-nifer Rhodes and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1082-1087.

Flood Control Experiences in China and 1991 Flood Dis-aster, Daniel J. Gunaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p965-970.

Hydraulic Risk of Flood Disaster Reduction at Dams, Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p549-556.

Implications of Design Uncertainty in Benefit-Cost Anal-ysis, Anand Prakash, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p120-125.

Loss Accounting Principles With Emphasis on Bridge Failure, Hal Cochrane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Magnitude of the Scour Evaluation Program, Lawrence J. Harrison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1067-1071.

Social-Economic Impacts of the October 1983 Flood in Pima County, Arizona, David A. Smutzer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1072-1075.

Ecuador—The Lower Guayas Flood Control and Drain-age Project—A Case Study, Peter Wittenberg and Wal-ter Ochs, (Irrigation and Drainage: Saving a Threat-end Resource—In Search of Solutions, Ted Engman, ed., 1992), p275-280.

### Flood forecasting

Appropriate Technology for Flood Warnings, Mark E. Nelson, CE June 92, p64-66.

Hydraulic Risk of Flood Disaster Reduction at Dams, Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p549-

Optimal Flood Warning Threshold: A Case Study in Con-nellsville, Pennsylvania, Duan Li, Yacov Y. Haimes, Eugene Stakhiv and David Moser, (Risk-Based Deci-sion Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283.

Quantitative Risk Assessment and Technology Transfer: Software Developments, Charles Yoe, (Risk-Based De-cision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p92-107.

Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p. 19-24.

Regional Frequency Analysis Using L-Moments, J. R. M. Hosking and J. R. Wallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p13-18.

Regional Methods for Design Floods in Australia, David H. Pilgrim, (Hydraulic Engineering: Saving a Threa-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1-6.

Separation of Skewness: Reality or Regional Artifact? Fahim Ashkar, Bernard Bobee and Jacques Bernier, HY Mar. 92, p460-475.

Session Report—Natural and Man-Made Hazards and Risk of Extreme Events, Jim Lambert, (Risk-Based De-cision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p358-359.

Assessment of Derived Flood Frequency Distributions, Timothy H. Raines and Juan B. Valdes, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p268-273.

Flood Control Experiences in China and 1991 Flood Disaster, Daniel J. Gunaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p965-970.

Generalized Least Squares Analyses for Hydrologic Regionalization, Jery R. Stedinger and Gary D. Tasker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p7-12.

New Look at Regional Flood-Frequency Relations for Arid Lands, Hjalmar W. Hjalmarson and Blakemore E. Thomas, HY June 92, p865-886.

Physically Based Flood Festures and Frequencies, Hsieh Wen Shen, Gregory John Koch and Jayantha T. B. Obeysekera, HY Apr. 90, p494-514.

Regional Flood Frequency Analysis Using Maps, A. I.

wen snen, Gregory John Roen and Jayantha T. B. Obeysekera, HY Apr. 90, p494-514.
Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p19-24.
Regional Frequency Analysis Using L-Moments, J. R. M. Hosking and J. R. Wallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p13-18.
Regional Methods for Design Floods in Australia, David H. Pilgrim, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1-6.
Station Selection for Pooling Flood Data in a Densely Gauged Region of the UK, Duncan W. Reed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p25-30.
Flood hydrology

Phod hydrology
Generalized Least Squares Analyses for Hydrologic Regionalization, Jery R. Stedinger and Gary D. Tasker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p7-12.

Flood Irrigation
Influence of Irrigation on Subsurface Drainage, J. C. Gould and J. C. Guitjens, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p183-188.

Flood peaks
Design of Flood Protection for Transportation Alignments on Alluvial Fans, Richard H. French, IR Mar./Apr. 92, p320-330.
Distribution of Wetland Hydrologic Parameters, Misganaw Demissie and Abdul Khan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p470-475.

Bhowmik, ed., 1992), p470-473.

Flood plain regulation
Dry Creek Watershed Flood Control Plan: A Case Study,
Eric S. Clyde, M. N. Saquib and Dennis J. Huff, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p287-292.

SCS Water Surface Profile Model—WSP2, William H.
Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p859-864.

Urban Development on Alluvial Fans, Lan-Yin Li Weber
and Virginia Bax-Valentine, (Housing America in the
Twenty-First Century, Mehmet Inan, ed., 1992), p1118.

Flood plain studies
Modeling Flow and Flood-Plain Storage in a Tidally Affected River, A. G. Strickland and Jerad D. Bales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1130-1135.

Flood plains

The Influence of Rectangular Pier Foundation on Local Scour, A. C. Parola, D. A. Schaefer, A. El-Khoury and B. M. Brown, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p132-137. Preferred Directions of Flow on Alluvial Fans, Richard H. French, HY July 92, p1002-1013.

Two-Dimensional Hydraulic Analysis of the Owensboro Bridge and Approaches, M. A. Ports, T. G. Turner and D. C. Froehlich, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p280-296.

Urban Development on Alluvial Fans, Lan-Yin Li Weber and Virginia Bax-Valentine, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p11-

228

Flord routing Numerical Solution of Muskingum Equation, Moham-mad Akram Gill, HY May 92, p804-809.

mad Akram Gill, HY May 92, p804-809.

Flooding
Appropriate Technology for Flood Warnings, Mark E. Nelson, CE June 92, p64-66.

Debris Torrents and Professional Responsibilities, S. O. Russell, El Jan. 90, p49-55.

Gearing up for the Debug, CE Oct. 92, p8.

Hydrologic Investigation of the April, 1983 Flooding in New Orleans, Louisian, Michael A. Ports, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p260-267.

Innovative Intake Design for Raritan River, Paul Y. Chung, William S. Howard and Robert Etterna, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p220-225.

Optimal Flood Warning Threshold: A Case Study in Connellsville, Pennsylvania, Duan Li, Yacov Y. Haimes, Eugene Stakhiv and David Moser, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283.

Trickle Channel Rehabilitation, Mark R. Hunter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p504-509.

When Sewer Rehab Doesn't Stop Basement Flooding, Thomas Rowlett and Kenneth Kelgard, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p648-633.

Floods

1-D Open-Channel Flow Simulation Using TVD-

Floods
1-D Open-Channel Flow Simulation Using TVD-McCormack Scheme, P. García-Navarro, F. Alcrudo and J. M. Saviron, HY Oct. 92, pl 359-1372.
Assessing Uncertainty of Unit Hydrograph, Yeou-Koung Tung and Bing Zhao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p543-648

348.
Calculation of Runoff from Rainfall Using "NURP" Data, Albert H. Halff, Henry M. Halff and Juan S. Rodriguez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p487-492.
Confidence, Internal for Dation, Floody with Estimated

1992), 949. 4992.
Confidence Interval for Design Floods with Estimated Skew Coefficient, Jahir Uddin Chowdhury and Jery R. Stedinger, HY July 91, p811-831.
Contaminated Sediment Transport During Floods, Thomas A. Fontaine, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p210-212. 212.

212. Design of Flood Protection for Transportation Alignments on Alluvial Fans, Richard H. French, IR Mar/Apr. 92, p320-330. Evaluation of Supercritical/Subcritical Flows in High-Gradient Channel, Douglas J. Trieste, HY Aug. 92,

p1107-1118.

The Great Chicago Flood of 1992, Randall R. Inouye and Joseph D. Jacobazzi, CE Nov. 92, p52-55.

HEC-6 Modeling of Sediment Management in Loiza Reservoir, Puerto Rico, Gregory L. Morris and Guangdou Hu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p630-635.

Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p1222-1227.

Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992, 0-87262-877-9, 634pp.

Jury Verdict: Frequency versus Risk-Based Culvert Design, Gary L. Lewis, WR Mar/Apr. 92, p166-184.
Loss Accounting Principles With Emphasis on Bridge Failure, Hal Cochrane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1076-1081.

shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1076-1081.

New Look at Regional Flood-Frequency Relations for Arid Lands, Hjalmar W. Hjalmarson and Blakemore E. Thomas, HY June 92, p868-886.

Overtopping Protection Alternatives for Dams, Noel R. Oswalt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p1210-1215.

Physically Based Flood Features and Frequencies, Hsieh Wen Shen, Gregory John Koch and Jayantha T. B. Obeysekera, HY Apr. 90, p494-514.

Prediction of Sedimentgraph from a Small Watershed in Poland in a Changing Environment, K. Banasik and D. E. Woodward, (Irigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p493-498.

Regional Methods for Design Floods in Australia, David H. Pilgrim, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1-6.

Seepage Influence on Stability of Bridge Abutments, D. J. Hagerty and A. C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

Separation of Skewness. Reality or Regional Artifact? Fahim Ashkar, Bernard Bobbe and Jacomes Revaice.

eparation of Skewness: Reality or Regional Artifact? Fahim Ashkar, Bernard Bobee and Jacques Bernier, HY Mar. 92, p460-475.

HY Mar. 92, p460-475.

Social-Economic Impacts of the October 1983 Flood in Pima County, Arizona, David A. Smutzer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1072-1075.

Status of ASCE Handbook of Hydrology, Thomas P. Wootton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p448-451.

Successful Interactions Between Hydraulic Engineering and Geomorphology in Identifying Flood Hazard Areas in the Southwestern United States, Richard H. French and Jeffrey R. Keaton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p581-586. p581-586.

Floodwalls
International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teresa Bowen MacArthur, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p569-574.
Levee/Floodwall Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808.

FROOTMER AND THE ACT OF THE ACT O

Construction Loads on Floors: Results of a Survey, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p499-

Design Live Loads for Coherent Crowd Harmonic Move-ments, A. Ebrahimpour and R. L. Sack, ST Apr. 92, p1121-1136.

Dynamics of Buildings with V-Shaped Plan, Sudhir K. Jain and Utpal K. Mandal, EM June 92, p1093-1112. Experimental Study of Secondary Systems in Base-Isolated Structure, G. Juhn, G. D. Manolis, M. C. Constantinou and A. M. Reinhorn, ST Aug. 92, p2204-2221.

Floor Live Load Models and Pattern Load Effects, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p503-506.

Free Vibration Analysis of Asymmetric Buildings, Sean Wilkinson and David Thambiratnam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p461-465.

Moisture Migration Through Concrete Floor Slabs, Robert W. Day, CF Feb. 92, p46-51.

Museum Floored on its Piles, CE Apr. 92, p85.

Tuned Mass Dampers for Balcony Vibration Control, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p72.3-740.

ned Mass Dampers to Control Floor Vibration from Humans, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p741-762.

Using Component Mode Synthesis and Static Shapes for Tuning TMDs, Mehdi Setareh, Robert D. Hanson and Ralf Peek, ST Mar. 92, p763-782.

Florida

Beach Nourishment with Aragonite and Tuned Structures, Kevin R. Bodge, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p73-89.

Damage Doesn't Reach the Beach, CE Dec. 92, p8.

Evolving Mitigation Requirements for Port Development, William K. Fehring, Mark Easley and David C. Carpenter, (Ports '92, David Torseth, ed., 1992), p203-213.

213.
Florida Picks a Partner, CE May 92, p20-21.
Florida Picks a Partner, CE May 92, p20-21.
Groundwater Management in Southern Florida, Mark M.
Wilsnack, (Irrigation and Drainage: Saving a Threatende Resource—In Search of Solutions, Ted Engman,
ed., 1992), p104-109.
Hillsboro Basin Surface Water Management Model,
David P. Preusch, Jayantha Obeysekera, John M.
Crouse and Kendrick Logsdon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p810-816.
Housing Opportunity or Social Engineering Implementing the Jobs-Housing Relationship—The Town of Weilington Experience, Jean E. Lindsey, (Housing Americain the Twenty-First Century, Mehmet Inan, ed., 1992),
p82-90.

p82-90.

in the Twenty-First Century, Mehmet Inan, ed., 1992), purricane Response Continues, CE Nov. 92, p12-13.
Linking Data Bases to Hydraulic Computations, Brian R. Turcotte and N. Davies Mundu, CP Jan. 92, p63-71.
Methodology for Validation of a Tampa Bay Circulation Model, Kurt Hess and Kathryn Bosley, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Bumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p83-94.
Monitoring of the 1988 Boca Raton Beach Nourishment Project, Richard H. Spadoni, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p120-136.
Pay As You Grow, Teresa Austin, CE Feb. 92, p64-65.
Proposed Development of South Central Florida Hydrologic Ecosystem Model, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p707-711.
Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352.
Sprayed-Zinc Galvanic Anodes for the Cathodic Protection of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p732-747.
Tapping Shallow Groundwater with Horizontal Wells, Brian J. Bornan and Donald R. Justice, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions,

Flotation

Effect of Collector Dosage on Metal Removal by Precipitation/Flotation, Venbakm C. Gopalratnam, Gary F. Bennett and Robert W. Peters, EE Nov./Dec. 92, p923-948.

Flow
7-Day 10-Yr Low Flow Relationships for Ungauged Sites
in Central Italy, Piergiorgio Manciola and Stefano
Casadei, (Irrigation and Drainage: Saving a Threatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), p250-256.

1992), p230-230. Computer Simulated Flow of Grouts in Jointed Rock, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., den, ed., Robert 1992), p461-473.

Computer Simulation of Granular Flows, Thomas G. Drake, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p752-755.

Conditions for Initiation of Rainfall-Induced Debris Flows, Nicholas Sitar, Scott A. Anderson and Kenneth A. Johnson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p834-849.

Continuum Model for Flows in Emergent Marsh Vegetation, Lisa C. Roig and Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p268-279.

Darcy-Weisbach Roughness Coefficients for Selected Residue Materials, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p481-486.

Estimating Urban and Suburban Sewerage Flows with Assistance of GIS Technology, Paul Kirshen, Daniel Nule and John Corliss, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p208-212.

Flow and Energy Dissipation Over Stepped Gabion Wieis, L. Pevers, P. Roust and G. Deservich Halbare.

Flow and Energy Dissipation Over Stepped Gabion Weirs, L. Peyras, P. Royet and G. Degoutte, HY May 92, p707-717.

The Flow in the Front Stagnation Region of a Square Plate with a Small Disturbing Wire in its Upstream, T. C. Su and Q. X. Lian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p470-473.

Improvement of Flow in Final Settling Tanks, Ulrich Bretscher, Peter Krebs and Willi H. Hager, EE May/ June 92, p307-321.

Mesh Generation for Estuarine Flow Modeling, Norman L. Jones and David R. Richards, WW Nov./Dec. 92, p599-614.

L. Jones and David R. Richards, WW Nov/Dec. 92, p599-614.

The Morphology and Dynamics of Natural and Laboratory Grain Flows, Richard R. McDonald and Robert S. Anderson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p748-751.

Sensitivity of Flow and Salt Transport to Uncertainties at Open Boundaries: A 3-D Experience, Bernard B. Highard Billy H. Johnson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p720-732.

Taylor-Galerkin Method for Wind Wave Propagation, H. S. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p87-90.

Two-Dimensional Circulation Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p607-619. Raiph Cheng, ed. and Crash p607-619.

Vibration of Beams and Trashracks in Parallel and In-clined Flows, Thang D. Nguyen and Eduard Naudasch-er, HY Aug. 91, p1056-1076.

Flow characteristics

Aspects of Parallel Processing in Reservoir Simulation, Richard Ewing, Patrick O'Leary and James Sochacki, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1922), p111-114.

Flow Capacity Effect on Vertical Drain Performance, R. Robert Goughnour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p993-1005.

Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warmer, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-

Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 8852.

BIOWHILE, Cd., 1992), P852.
Systolic Anterior Motion of the Mitral Valve: In Vitro Flow Studies, Xavier P. Lefebvre, Shengqiu He, Robert A. Levine and Ajit P. Yoganathan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p701-704.

Flow control Controlling the Flow of Recyclable Material, David L. Snyder, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, p.9-21.

Momentum Model of Flow Past Weir, Amruthur S. Ramamurthy, Ngoc-Diep Vo and German Vera, IR Nov./Dec. 92, p988-994.

Sluice-Gate Discharge Equations, Prabhata K. Swamee, IR Jan./Feb. 92, p56-60.

Flow Distribution in a Stacked Clarifier, M. Pad-manabhan, T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633.

low duration curve

Regional Flow-Duration Curves for Ungauged Sites in Massachusetts, Neil Fennessey and Richard M. Vogel, WR July/Aug. 90, p530-549.

Flow measurement
A Brief Literature Review of Open-Channel Current
Meter Testing, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p458-463.

Citical Death Belations for Flow Measurement Design.

Critical Depth Relations for Flow Measurement Design, A. J. Clemmens and M. G. Bos, IR July/Aug. 92, p640-644.

644.

Flow Measurement with Rectangular Free Overfall, Vito Ferro, IR Nov./Dec. 92, p956-964.

Flow Visualization Studies in the Novacor Left Ventricular Assist System, Harvey S. Borovetz, Frank Shaffer, Richard Schaub, Laura Lund and John Woodard, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p713-716.

Momentum Model of Flow Past Weir, Amruthur S. Ramamurthy, Ngoc-Diep Vo and German Vera, IR Nov./Dec. 92, p988-994.

Sluice-Gate Discharge Equations, Prabhata K. Swamee, IR Jan./Feb. 92, p36-60.

Small Parshall Flume Rating Correction, Steven R. Abt, Christopher Cook, Kenneth J. Staker and Derek D. Johns, HY May 92, p798-803.

Velocity and Depth of Flow Calculations in Partially Filled Pipes, A. Saatci, EE Nov/Dec. 90, p1202-1208.

Flow patterns
About Moving Contact Lines, Shih-An Yang and Allen T.
Chwang, EM Apr. 92, p735-745.
Analytical Hydraulic Modeling of Road Culverts, Rohin
S. Saleh and Ralph Hwang, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992), p798-803

prys-803.

Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, Siew-Ann Tan, Kee-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p209-228.

Flow in a Model Symmetric Bifurcation, B. B. Lieber, Y. Zhao and J. H. Citriniti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p840-843.

1992), p840-843.
Granular Flow on a Bumpy Inclined Chute, Marijan Babić, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1024-1027.
Influence of Gas Phase Turbulence on the Transport of Particles, Jennifer L. Sinclair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042.

1992), p1039-1042.

Numerical Simulations of Diastolic Flow Patterns in a Model Left Ventricle with Varying Degrees of Mitral Stenosis, Richard T. Schoephoerster and Erick A. Gonzalez, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p968-971.

Pattern Formation and Time-Dependence in Flowing Sand, R. P. Behringer and G. W. Baxter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1028-1030.

Roll-Waves on a Non-Newtonian Mud Layer, Chiu-on M. and Chinan C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p892-895.

Routing Debris Flows with Particle Segregation, Tamotsu Takahashi, Hajime Nakagawa, Tatsuo Harada and Yousuke Yamashiki, HY Nov. 92, p1490-1507.

Shock Pattern at Abrupt Wall Deflection, Markus Schwalt and Willi H. Hager, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

Marshail Jennings, ed. and Nami G. Bhowmik, ed., 1992), p231-236. Stepwise Disaggregation Scheme for Synthetic Hydrolo-gy, Emidio G. Santos and Jose D. Salas, HY May 92, p765-784.

p765-784.

Flow rates

ALIVE (Advance Linear Velocity): Surface Irrigation
Rate Balance Theory, D. Renault and W. W. Wallender, IR Jan./Feb. 92, p138-155.

Case Studies of Semi-Closed Pipeline Systems for Flexible Deliveries, John L. Merriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p468-473.

Flow Rates at Signalized Intersections Under Cold Winter Conditions, Ian L. Botha and Thomas R. Kruse, TE
May/June 92, p439-450.

Furrow Flow Velocity Effect on Hydraulic Roughness,
Thomas J. Trout, IR Nov./Dec. 92, p981-987.

Hydrologic Assessment for Ripariam Restoration Projects, Douglas Hamilton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p624-629.

Influence of Irrigation on Subsurface Drainage, J. C.

Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p624-629.

Influence of Irrigation on Subsurface Drainage, J. C. Gould and J. C. Guitjens, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p183-188.

Linking Data Bases to Hydraulic Computations, Brian R. Trucotte and M. Davies Mtundu, CP Jan. 92, p63-71.

Lup Atting Curves from Goodwin Creek, Roger A. Kuhnle and Andrew J. Bowie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p741-746.

Rating Correction for Lateral Settlement of Parshall Flumes, Steven R. Abt and Kenneth J. Staker, IR Nov/Dec. 90, p797-803.

Small Parshall Flume Rating Correction, Steven R. Abt, Christopher Cook, Kenneth J. Staker and Derek D. Johns, Hy May 92, p798-803.

WSPRO Files for Slope-Area Computations, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334.

ed. and Nani G. Bhowmik, ed., 1992), p329-334.

Flow resistance
Alluvial Canals Adequacy, Siddig E. Ahmed, IR July/
Aug. 92, p543-554.

Boundary Shear Stress and Roughness Over Mobile Alluvial Beds, Peter J. Whiting and William E. Dietrich,
HY Dec. 90, p1495-1511.

Dimensionally Homogeneous Manning's Formula, Ben
Chie Yen, HY Sept. 92, p1326-1332.

Dracy-Weisbach Roughness Coefficients for Gravel and
Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz
and Gary A. Wieman, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
F747-752.

Field-Measured Hydraulic Resistance Characteristics in Vegetation-Infested Canals, Mohamed F. Bakry, Timo-thy K. Gates and Ahmed F. Khattab, IR Mar./Apr. 92, p256-274.

p236-274.
Flow Capacity through Wide and Submerged Vegetal Channels, M. W. Abdelsalam, A. F. Khattab, A. A. Khatifa and M. F. Bakry, IR Sept./Oct. 92, p724-732.
Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p139-144. 144.

Flow Resistance of Riprap, Stephen T. Maynord, HY June 91, p687-696.

June 91, p687-696.
Furrow Flow Velocity Effect on Hydraulic Roughness,
Thomas J. Trout, IR Nov./Dec. 92, p981-987.
Mechanics of Saltating Grains. II, Masato Sekine and
Hideo Kitkawa, HY Apr. 92, p536-558.
Modern Approach to Design of Grassed Channels, N.
Kouwen, IR Sept./Oct. 92, p733-743.
Predicting Influence of Bank Vegetation on Channel Capacity, Richard Masterman and Colin R. Thorne, HY
July 92, p1052-1058.
Resistance in Elat-Bed Sediment-Lader Flows, D. A. Lyn.
Resistance in Elat-Bed Sediment-Lader Flows, D. A. Lyn.

Resistance in Flat-Bed Sediment-Laden Flows, D. A. Lyn, HY Jan. 91, p94-114.

Stochastic Theory for Irregular Stream Modeling, Part I: Flow Resistance, Shu-Guang Li, Lakshmi Venkatara-man and Dennis McLaughlin, HY Aug. 92, p1079-1090.

Computer Codes for Modeling Multi-Phase Flow and Transport in the Subsurface, Paul K. M. van der Heijde, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p31.

Computer Simulation of Dry Layered Granular Flow Down an Incline Composed of Grains, Chi-Hai Ling and Chyan-Deng Jan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p760-763.

Development of a Comprehensive Modeling System for Remediation of Contaminated Groundwater, Jeffery P. Holland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1178-1183.

Flow Dynamics in an End-to-End Vascular Graft Junc-tion, Y. H. Kim and K. B. Chandran, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p964-967.

ed., 1992), p904-907.

Real-Time Simulation and Visualization of 2-D Surface Water Flow, H. C. Lin, N. L. Jones and D. R. Richards, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-340.

Use of Wingz Spreadsheet as an Interface to Total-System Performance Assessment, W. F. Chambers and A. H. Treadway, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493.

Flow Visualization of Lid-Driven Cylindrical Cavity Flow, You-Gon Kim and Ching-Jen Chen, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p393-396.

Flow Visualization Studies in the Novacor Left Ventricular Assist System, Harvey S. Borovetz, Frank Shaffer, Richard Schaub, Laura Lund and John Woodard, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p713-716.

Modelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, N. Jothi Shankar, H. F. Cheong and C. T. Chan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), 7650, 683

Real-Time Simulation and Visualization of 2-D Surface Water Flow, H. C. Lin, N. L. Jones and D. R. Richards, (Hydraulic Enjineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-340.

and Nani G. Bhowrnik, ed., 1992, p. 33-340. Techniques for Visualization of Estuarine and Coastal Flow Fields, S. E. Rennie and J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph, Cheng, ed. and Craig Swanson, ed., 1992), p48-55. The Transverse Vortex in the Wall Regions of the Turbulent Boundary Layers in the Flows with Adverse Pressure Gradient, Q. X. Lian and T. C. Su, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p474-477.

FGD Waste Engineering Properties are Controlled by Disposal Choice, Charles L. Smith, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p44-59.

The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.

Fluid dynamic

Computer Modeling of Forced Mixing in Waste Storage Tanks, L. L. Eyler and T. E. Michener, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p636-642.

Flow Dynamics in an End-to-End Vascular Graft Junction, Y. H. Kim and K. B. Chandran, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p964-967.

Flow in a Model Symmetric Bifurcation, B. B. Lieber, Y. Zhao and J. H. Citriniti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p840-843.

Fluid Dynamics at the Carotid Bifurcation, A. S. Anayiotos, D. P. Giddens, S. A. Jones, S. Giagov and C. K. Zarins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-847.

Important Sources of Errors in Computational Hydraulics, Nosrat Maghsoudi and Daryl B. Simons, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p392-397.

Lagrangian Motions in Simple Kinematic Oscillatory Flow Field, Kuo-Chuin Wong, WW Jan./Feb. 91, p29-

Leakage Characteristics of the St. Jude Heart Valve, Theresa E. Brandner and Yi-Ren Woo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708.

Lumped Parameter Model for the Dynamics of the Pul-monary Circulation, B. B. Lieber, Z. Li and B. J. B. Grant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p848-851.

Pressure Losses Across Sequential Stenoues in Collapsible Tubing, Maria Siebes and Binu John, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p832-835.

Pulmonary Artery Velocity Profiles in Young Lambs, Be-linda Ha, Hiroshi Katayama, Robert Krzeski, Carol L. Lucas, G. William Henry, Patricia Lynch, Ajir P. Yo-ganathan, Jose I. Ferreiro and Benson R. Wilcox, En-gineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p836-839.

Computerized Tomographic Analysis of Fluid Flow in Fractured Tuff, C. W. Felice, J. C. Sharer and E. P. Springer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p296-299.

Controlling Pulsed Incompressible Flow, Richard Ian Stessel, EY Apr. 92, p1-17.

Estimating Wave-Induced Bottom Velocities at Vertical Wall, Steven A. Hughes, WW Mar./Apr. 92, p175-192. Free Boundary, Fluid Flow, and Seepage Forces in Excavations, Ronaldo I. Borja, GT Jan. 92, p125-146.

Measured Internal Kinematics for Shoaling Waves with Theoretical Comparisons, M. W. Griffiths, W. J. Easson and C. A. Greated, WW May/June 92, p280-299.

Movement of Slopes During Rapid and Slow Drawdown, Ronaldo I. Borja and Sunil S. Kishnani, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404

Shoreline Profile of Stokes-Mode Edge Waves, Harry H. Yeh, WW Jan./Feb. 92, p112-116.

Solving Turbulent Flows Using Finite Elements, John I. Finnie and Roland W. Jeppson, HY Nov. 91, p1513-1530.

Source Control of Intrusions Along Horizontal Boundary, J. Bühler, S. J. Wright and Y. Kim, HY Mar. 92, p442-459.

Three-Dimensional Characteristics Model of Wind-Generated Turbulent Flow, Panayis-Fokion Matsoukis and Aristotelis Papadopolis-Dezorzis, EM Aug. 92, p1526-1545.

Vedernikov's Number as a Measure of Flow Stability, Cheng-lung Chen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p753.

### Fluid mechanics

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066.

Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp.

A Hydraulic Study of Venous Valve Closure, Shi-kang Wang, Yu-chen Qiu and Ned H. C. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedtwecki, ed., 1992), p697-700.
Investigation of Zebra Mussel Adhesion Strength Using a Rotating Disk, Josef Daniel Ackerman, C. Ross Ethier, D. Grant Allen and Jan K. Spelt, EE Sept./Oct. 92, p708-724.

p708-724. Leakage Characteristics of the St. Jude Heart Valve, Theresa E. Brandner and Yi-Ren Woo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708. Systolic Anterior Motion of the Mitral Valve: In Vitro Flow Studies, Xavier P. Lefebvre, Shengqiu He, Robert A. Levine and Ajit P. Yoganathan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p701-704.

Fluidized bed combustion Project Tests Safer Burning of Medical Waste, CE Jan. 92, p19,21.

Phidized bed processing
Hydrogen Reduction of Lunar Soil and Simulants, Robert
O. Ness, Jr., Laura L. Sharp, David W. Brekke, Christian W. Knudsen and Michael A. Gibson, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p617-628.

1992), p617-628.

Modeling of Toxic Wastewater Treatment by Expanded Bed Anaerobic GAC Reactors, G. F. Nakhla and M. T. Suidan, EE July/Aug. 92, p495-512.

Recent Developments of the Carbotek Process for Production of Lunar Oxygen, Christian W. Knudsen, Michael A. Gibson, David J. Brueneman, Seishi Suzuki, Tetsuji Yoshida and Hiroshi Kanamori, (Engineering, Construction, and Operations in Space III, Willer, ed., 1992), p597-605.

Softening by Fluidized Red Crystalligers.

Softening by Fluidized Bed Crystallizers, Willard D. Harms, Jr. and R. Bruce Robinson, EE July/Aug. 92, p513-529.

p513-529.
Fluidizing
3-D Effects of Incipient Fluidization of Fine Sands in Unbounded Domains, Gerard P. Lennon, William MacNair, Richard N. Weisman and Jeffrey Lindley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p654-659.
Tackling Trapped Sediments, Scott A. Jenkins, Joseph Wasyl and David W. Skelly, CE Feb. 92, p61-63.
Velocity Gradient in Filter Backwashing, Mustafa Turan, EE Sept./Oct. 92, p776-790.

Fluid-structure interaction
Design Loads for Sloshing in TLP Pontoons Tanks,
Stephen W. Balint, (Civil Engineering in the Oceans V,
Robert T. Hudspeth, ed., 1992), p99-113.
Probabilistic Description of Buffeting Response of LongSpan Bridges, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2401-2420.

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441.

Flumes
Computational Model Verification Test Case Using
Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic
Engineering: Saving a Threatened Resource—In Search
of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p436-441.
Critical Depth Relations for Flow Measurement Design,
A. J. Clemmens and M. G. Bos, IR July/Aug. 92, p640-

A. J. Clen 644.

644.

Effects of Viscosity on Migration of Spills of Hazardous Liquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p784-789.

Measurement and Prediction of Surface Shear Stress in Annular Flume, D. I. Graham, P. W. James, T. E. R. Jones, J. M. Davies and E. A. Delo, HY Sept. 92, p1270-1286.

pl270-1280. Rating Correction for Lateral Settlement of Parshall Flumes, Steven R. Abt and Kenneth J. Staker, IR Nov/Dec. 90, pp97-803. Small Parshall Flume Rating Correction, Steven R. Abt, Christopher Cook, Kenneth J. Staker and Derek D. Johns, HY May 92, p798-803.

Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.

Corrosion Resistance of Stainless Steels and High Ni-Cr Alloys to Acid Fluoride Wastes, H. D. Smith, K. H. Pool, D. B. Mackey and E. B. Schwenk, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p620-627.

Flushing

Flushing
Design, Construction, and Performance of a Baffled
Breakwater, Jonathan W. Lott and Walter E. Hurtienne, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), 9487-502.

HEC-6 Modeling of Sediment Management in Loiza Reervoir, Puerto Rico, Gregory L. Morris and Guangdou
Hu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowrnik, ed., 1992), p630-635.

Model for Estimating Tidal Flushing of Small Embayments, Lawrence P. Sanford, William C. Boicourt and
Stephen R. Rives, WW Nov./Dec. 92, p633-654.
Tide- and Wind-Driven Flushing of Boston Harbor, Mas-

Tide- and Wind-Driven Flushing of Boston Harbor, Massachusetts, Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p594-606.

Flutter

Finite Element-Based Flutter Analysis of Cable-Suspended Bridges, Ahmad Namini, Pedro Albrecht and Harold Bosch, ST June 92, p1509-1526.

Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.

Flavial nydraulics
Computer Simulation of River Channel Changes at a
Bridge Crossing on a Point Bar, Howard H. Chang,
Marshall E. Jennings and Steve Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p76-81.

First Step Away from Lacey's Regime Equations, Michael A. Stevens and Carl F. Nordin, Jr., HY Nov. 90, p1422-1425.

River Bed Degradation Due to Abrupt Outfall Lowering, C. W. Lenau and A. T. Hjelmfelt, Jr., HY June 92, p918-933.

Fly ash

Fly ash
Alkali Activation of Class C Fly Ash, Amitava Roy, Paul
J. Schilling, Harvill C. Eaton and Roger K. Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p104-115.
Backfill-Stiffened Foundation Wall Construction, Robert
Nicholls, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth
L. Bergeson, ed., 1992), p286-295.
Chloride Binding Capacity in Computation Park Ash Paster O.

Chloride Binding Capacity in Cement-Fly-Ash Pastes, O. A. Kayyali and M. Sh. Qasrawi, MT Feb. 92, p16-26. Design of the Boney Falls RCC Emergency Spillway, W. J. Marold, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-

Durability of MSW Fly-Ash Concrete, James R. Triano and Gregory C. Frantz, MT Nov. 92, p369-384. Evaluation of Flowable Fly-Ash Backfill. 1: Static Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463.

Evaluation of Flowable Fly-Ash Backfill. II: Dynamic Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p464-474.

FGD Waste Engineering Properties are Controlled by Disposal Choice, Charles L. Smith, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p44-59.

Fly-Ash Slurry Island: I. Theoretical and Experimental Investigations, Sumio Horiuchi, Masataka Taketsuka, Takuro Odawara and Hiromi Kawasaki, MT May 92,

Fly-Ash Slurry Island: II. Construction in Hakucho Ohashi Project, H. Kawasaki, S. Horiuchi, M. Akatsuka and S. Sano, MT May 92, p134-152. Highway Construction Use of Wastes and By-Products, Robert J. Collins and Stanley K. Ciesielski, {Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p140-152. Improved Resilient Modulus Realized with Waste Product Mixtures, Seung W. Lee and K. L. Fishman, (Groutering, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1356-1367. Influence of Particle Structure on Properties of Fly Ash

1992), pl 356-1367. Influence of Particle Structure on Properties of Fly Ash and Sand, Krzysztof Parylak, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 031-1041. Institutional Constraints to the Use of Coal Fly Ash in Civil Engineering Construction, Timothy N. Kyper, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p32-43. Interaction of Inorganic Leachate with Compacted Pozzolanic Fly Ash, Tuncer B. Edil, Linda K. Sandstrom and P. M. Berthouex, GT Sept. 92, pl 410-1430. Mix Design for Flowable Fly-Ash Backfill Material, R. Janardhanam, F. Burns and R. D. Peindl, MT Aug. 92, p252-263.

Mobile Pilot Plant to Reuse Fly Ash in Concrete, CE Oct. 92, p18-19.

Jule 19.
 Problems Related to Disposal of Fly Ash and its Utilization as a Structural Fill, Buddhima Indraratna, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p.274-285.

Properties of Gypsum Wallboards Containing Fly Ash, Ramesh C. Joshi, Joonu O. Thomas and Rex B. Adam, MT May 92, p212-225.

Start-Ups, CE June 92, p11.

Strength and Corrosion Resistance of Superplasticized Concretes, Mohammed Maslehuddin, Rasheeduzzafar and Abdulaziz Ibrahim Al-Mana, MT Feb. 92, p108-

Three Case Histories of Waste Stabilization, Edward L. Kosinski, David S. Martin and Alan R. Ringen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Boden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1261-1272.

Utilization of Fly Ash in High Volumes for Low Strength Cement Composites, P. Balaguru, (Utilization of Waster Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p308-319.

Constitutive Modeling and Simulation of Energy Absorb-ing Polyurethane Foam Under Impact Loading, James A. Sherwood and Colin C. Frost, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158.

1992), p155-158.
Large Deformation Elastic Behavior of Low-Density Solid Foams, William E. Warren and Andrew M. Kraynik, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p143-146.
Mechanical Response of Cellular Materials Used in Waste Shipping Containers, A. K. Maji, S. Donald and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p308-311.

Rate-Dependent Plasticity Representation for Energy-Absorbing Materials, Q. H. Zuo, A. K. Maji, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl 51-154.

Food supply

An Integrated Human/Plant Metabolic Mass Balance Model, A. B. Thompson, J. R. Schulz and C. G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1777-1788.

Foot bridges A Steel Box Girder Bridge—With a Twist, CE Apr. 92, p16-17.

Vibration of Pedestrian Overpass, Tso-Chien Pan, CF Feb. 92, p34-45.

Footings
Bearing Capacity of Expanded-Base Piles in Sand, William J. Neely, GT Jan. 90, p73-87.
Cone Models for Soil Layer on Rigid Rock. II, Jethro W. Meek and John P. Wolf, GT May 92, p686-703.
Eccentrically Loaded Plates on Reinforced Subgrades, Vito A. Guido and John J. Nocera, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1116-1128. 1128.

Effect of Footing Shape on Behavior of Cantilever Re-taining Wall, John S. Horvath, GT June 91, p973-978.
Effects of Footing Location on Bridge Pier Scour, J. Ster-ling Jones, Roger T. Kilgore and Mark P. Mistichelli, HY Feb. 92, p280-290.

Elastic-Plastic Analysis of Footings on Anisotropic Soils, A. Nanda and T. Kuppusamy, GT Mar. 92, p428-448. Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401.

II., GT Sept. 91, p1382-1401.

Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chus, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1941-1951.

Reinforced Granular Soil for Track Support, G. P. Raymond, M. S. A. Abdel-Baki, R. G. Karpurapu and R. J. Bathurst, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1104-1115.

Reinforced Sand Behavior Overlying Compressible Subgrades, Gerald P. Raymond, GT Nov. 92, p1663-1680.

1680.
Risk-Costs for Scour at Unknown Bridge Foundations, G. Kenneth Young, Stuart M. Stein and Roy Trent, (Hydraulic Engineering; Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111.
Shallow Soil Mixing—A Case History, David Broomhead and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p564-576.

Damage Diagnosis of Steel Frames Using Vibrational Sig-nature Analysis, G. C. Yao, K. C. Chang and G. C. Lee, EM Sept. 92, p1949-1961.

EM Sept. 92, p1949-1961. Empirical Estimation of Double-Layer Repulsive Force between Two Inclined Clay Particles of Finite Length, Ning Lu and A. Anandarajah, GT Apr. 92, p628-634. Force on Slab Beneath Hydraulic Jump, Javad Farhoudi and Rangaswami Narayanan, HY Jan. 91, p64-82. Interaction of Steep Waves with Vertical Walls, D. Sen, WW Sept./Oct. 92, p453-473. Système International Yes, Newton No, Douglas W. Barr, CE Sept. 92, p6.

Forecasting
Coastal Engineering—The Pastl, The Presentl, The Future? Omar J. Lillevang. (Coastal Engineering Practice
'92, Steven A. Hughes, ed., 1992), pl-11.

ture? Omar J. Lillevang, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p1-11.

A Coastal-Ocean Hindeast/Forecast Model, Ping Chen, Yan-H. Zhang, Kwang-W. You and Lie-Yauw Oey, (Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p175-187.

Computerized Management Systems for Pavement Networks, Kathryn A. Cation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p293-300.

Empirical Simulation of Future Hurricane Storm Histories as a Tool in Engineering and Economic Analysis, Loon Borgman, Martin Miller, Lee Butler and Robin Reinhard, (Civil Engineering in the Oceans V, Robert I. Hudspeth, ed., 1992), p42-65.

Forecasting Instabilities in Groundwater Parameters, Fethi Ben-Jemaa and Miguel A. Mariho, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p90-95.

A Forecasting Model of Gaming Revenues in Clark County, Nevada, B. Edwards, A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, (High Level Radioactive Waste Management Program Committee, 1992), p943-948.

Forecasting the Space-Time Stability of Radioactive Waste Isolation in Salt Formations, E. B. Anderson, A. I. Karelin, A. S. Krivokhatsiy and V. G. Savonenkov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 22114-2121 mittee, 1992), p2114-2121.

Generating Detailed Emissions Forecasts Using Regional Transportation Models: Current Capabilities and Is-sues, Robert G. Ireson, Julie L. Fieber and Marianne C. Causley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p142-160.

Integrated Software for Transportation Emissions Analysis, William Loudon and Malcolm Quint, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p161-176.

'Northeast' Conference Has National Implications, CE July 92, p12,14.

Nowcast Protocol for the Great Lakes Forecasting Sys-tem, Chieh-Cheng J. Yen, Keith W. Bedford and David J. Schwab, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p140-148.

Optimal Capacity Expansion in Multi-Aquifer Systems, Hasan Yazıcışıl, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p432-

438

Predicting Water Demand in Agricultural Regions Using Time Series Forecasts of Reference Crop Evapotranspi-ration, John C. Tracy, Miguel A. Mariño and S. Alireza Taghavi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p30-55.

A Predictive Model of the Currents in Cleveland Bay, Brian King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p746-758.

Solid Waste Travel Demand Model Using GIS and Simulation for Evaluating Site Impacts, Erin K. Bashaw and P. A. Koushki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p185-189.

Survey Predicts Bridge Trends for the 1990s, CE Sept. 92, p12,14.

Using a Numerical Model to Evaluate Dredging Options, Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), Jennings, e. p1024-1029.

Water Demand Management in the Las Vegas Valley Re-gion, Timothy D. Feather and Nick Braybrooke, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p44-49.

Water Planning Using an Expert GIS, Daene C. McKin-ney, David R. Maidment and Mustafa Tanriverdi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p219-224.

Wave Forecasting for Construction in Mobile Bay, Scott L. Douglass, William W. Schroeder and John T. Robin-son, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p713-727.

Foreign engineering

Underground Research: Here and There, Raymond L. Sterling, CE Dec. 92, p56-58.

Improving International Competitiveness, Robert C. West, El Apr. 92, p107-112.

Strategies in Risk Management of On-Demand Guaran-tees, Robert L. K. Tiong, CO June 92, p229-243.

Technology Transfer to Developing Countries, William J. Carmack, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p227-231.

U.S. Army Corps of Engineers and Afghanistan's Highways 1960-1967, Frank N. Schubert, CO Sept. 91, p445-459.

Forenale engineering
An Airfield Pavement Forensic Analysis: Cairo East Air
Base, Randolph Charles Ahlrich and Gary Lee Anderton, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),
p39-52.

p39-32.
Forensic Analysis of a Two-Component Joint Sealant Using FTIR-ATR, Laurand H. Lewandowski, Larry N. Lynch and Rogers Graham, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p33-65.
Forensic Analysis Techniques for Joint Sealants, Rogers T. Graham and Larry N. Lynch, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p404-414.
Research Needs Related to Exercise Engineering of Com-

Thomas D. Wnite, ed., 1992), p404-414.
Research Needs Related to Forensic Engineering of Constructed Facilities, Julie Mark Cohen, W. Gene Corley, Ping K. Wong and John M. Hanson, CF Feb. 92, p3-11.
Standard Methodologies for the Forensic Investigation of Pavements, James O'Kon, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p31-38.

Forests Hydrologic Model for Drained Forest Watershed, E. J. McCarthy, J. W. Flewelling and R. W. Skaggs, IR Mar/Apr, 92, p242-255.
Sludge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar/Apr. 92, p196-208.

Small Stream Classification—A Process Based Approach, Jeffrey B. Bradley and Peter J. Whiting, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p695-700.

Formwork, construction
A Connectionist Vertical Formwork Selection System, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p171-

1178. Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed. 1992), p1250-1261. Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 22, p179-198. Neuroform—Neural Network System for Vertical Formwork Selection, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, CP Apr. 92, p178-199.

Rotating Disk, Josef Daniel Ackerman, C. Ross Ethier, D. Grant Allen and Jan K. Spelt, EE Sept./Oct. 92, p708-724.

Foundation beams
Stability of Frames with Grade Beam and Soil Interaction, George Lin, EM Jan. 92, p125-139.

Foundation construction
Backfill-Stiffened Foundation Wall Construction, Robert
Nicholls, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth
L. Bergeson, ed., 1992), p286-295.
A Monumental Task, Victor Omelchenko, Thad Bergling,
David J. Oleynik and Satish B. Shah, CE June 92, p60-

Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, Kevin A. Pierce and Laszlo Buzasi, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p663-679.

Foundation design Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, Kevin A. Pierce and Lazzlo Buzasi, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p663-679.

Reserve Capacity Design Method (RCDM) for Deepwater Piled Foundations, J. M. E. Audibert, J. L. Mueller and S. R. Bamford, WW Jan./Feb. 92, p32-42.

Foundation performance
Damage to Two Apartment Buildings Due to Moisture
Variation of Expansive Soil, Robert W. Day, CF Aug.
92, p169-176.

Foundation stability analysis

Stability Evaluation During Staged Construction, Charles C. Ladd, GT Apr. 91, p540-615.

Active Earth Pressure on Walls With Base Projection, Amjad F. Barghouthi, GT Oct. 90, p1570-1575.

Ambient Temperature Effect in Concrete Dam Founda-tion Seepage, E. C. Kalkani, GT Jan. 92, p1-11. Analysis of a Wharf for a Container Terminal, Luis Her-nández Toca and José A. Arréllaga, (Ports '92, David Torseth, ed., 1992), p228-237.

Torseth, ed., 1992), p228-237.

Analysis of Laterally Loaded Shafts in Rock, John P. Carter and Fred H. Kulbawy, GT June 92, p839-855.

Backfill-Stiffened Foundation Wall Design, Robert Nicholls, GT Nov. 92, p1822-1836.

The Caisson Solution, Bennie L. Benjamin, Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47.

Computer Iterative Technique for Soil-Structure Interaction, Rusk Masih, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p418-425.

Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29.

Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Deep Water Container Wharf & Crane Foundation, John E. Gant, (Ports '92, David Torseth, ed., 1992), p238-247. Design of a Support and Foundation for a Large Lunar Optical Telescope, Koon Meng Chua, Stewart W. Johnson and R. Sahu, Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1952-1963.

and Russell J. Miller, ed., 1992), p1952-1963.

Design of Floating Stone Columns in Hydraulic Fill, Raymond A. DeStephen, David W. Kozera and Frank J. Swekosky, Grouling, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p829-841.

Design of Oak Point Link Railroad Trestle, Eugene Pollner and Kim Plumacher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809.

Design of Socketed Drilled Shafts in Limestone, M. C. McVay, F. C. Townsend and R. C. Williams, GT Oct. 92, p1626-1637.

Dynamic Experiments on Two Pile Groups, H. El-

Dynamic Experiments on Two Pile Groups, H. El-Marsafawi, Y. C. Han and M. Novak, GT Apr. 92,

Effect of Footing Shape on Behavior of Cantilever Re-taining Wall, John S. Horvath, GT June 91, p973-978.

teffect of Soil Treatment on Dynamic Response of Foundations, M. H. Maher and J. P. Welsh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1922), p855-

Soo.

Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 22, p323-336.

Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 92, p323-336.

anu Jonn r. wetzel, AS July 94, p323-339.
An Evaluation Study of Modified Mohr-Coulomb and
Cap Models, Hamdan N. Al-Ghamedy and Sahel N.
Abduljauwad, Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p717-

The Evolution of Geotextile Reinforced Embankments, C. Joel Sprague and Michael Koutsourais, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1129-1141.

p1129-1141.

Exact Nonstationary Response of a Sliding Rigid Structure to a Modulated White Noise Base Excitation, Marc P. Mignolet and Guangwuu W. Fan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p408-411.

Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Experimental and Theoretical Dynamic Compliances of

Experimental and Theoretical Dynamic Compliances of Foundations, Ronald Y. S. Pak and Bojan B. Guzina, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p596-599.

Frictional Aspect of Rocking-Sliding of a Rigid Block with Surface Impact, Majid Shekarian, Joel P. Conte and Pol D. Spanos, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-331.

331.
Grouting Improvement of Foundation Soils, Francesco Gallavresi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl-38.
Hybrid Grouting Techdniques to Stabilize a Weakly Cemented Sandstone at King Talal Dam, Jordan, B. A. Anthony, M. P. Bruen, R. R. Mann and Z. Alem, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.
[Jestification of Soil Properties from Foundation Impre-

Identification of Soil Properties from Foundation Impedance Functions, J. E. Luco and H. L. Wong, GT May 92, p780-795.

24, p. 104-193.
Interaction Between Soil and a Rigid Foundation in a Layered Medium: A New Analytical Approach, R. C. Zhang, Y. Yong and J. Yu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p584-587.

1992), p584-587.
A Knowledge Based System with Uncertainty for the Soil, Cherif Boulemia, Daniel Boissier and Jihad Al-Hajjar, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p365-368.
Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chua, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Müller, ed., 1992), p1941-1951.
Magnitude of the Sour Evaluation Program, Lawrence J.

Magnitude of the Scour Evaluation Program, Lawrence J. Harrison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p1067-1071.

ed. and Nani G. Bhowmik, ed., 1992), p1067-1071.
Military Techniques for Expedient Repair of Earthquake
Damaged Harbor Infrastructure, Lyndell Z. Hales and
Ivan L. Sheall, (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), p370-386.
Necessary Redundancy in Geotechnical Engineering, Jorj
O. Osterberg, GT Nov. 89, p1511-1531.

O. Usterberg, GT Nov. 89, p1511-1531.
Nonlinear Modeling of Truss-Plate Joints, Leslie Groom and Anton Polensek, ST Sept. 92, p2514-2531.
Performance of an Embankment Dam With Partial Cutoff, Pascual H. Perazzo and Tauseef I. Choudry, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1022-1032.

Probability of Bridge Failure Due to Pier Scour, P. A. Johnson and B. M. Ayyub, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p690-695.

Recent Progress in American Pinpile Technology, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p765-777. Regolith Mechanics, Dynamics, and Foundations, Mammed M. Ettouney and Haym Benaroya, AS Apr. 92, p214-229.

72. p. 14-229.
Reinforced Granular Soil for Track Support, G. P. Raymond, M. S. A. Abdel-Baki, R. G. Karpurapu and R. J. Bathurst, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1104-1115.

conan, Cu., 1996, p. 1104-1113.

Hagerty and A. C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

1372, pp. 137

ed., 1992), p260-263.

Stabilization of Pier Foundation Using Jet Grouting Techniques, R. Parry-Davies, R. M. H. Bruin, G. Wardle and M. G. Nixon, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p156-168.

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p328-331.

Walking of Flatwork on Expansive Soils, Robert W. Day, CF Feb. 92, p52-57.

Fourier analysis Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, pt 751-1771.

Fourier series

Boundary-Continuous Fourier Solution for Clamped Mindlin Plates, Humayun R. H. Kabir and Reaz A. Chaudhuri, EM July 92, p1457-1467.

Chaudhuri, EM July 92, p1457-1467.

A Fourier Series Solution to Bottom Roughness Induced Stresses During Pipe Laying, Naum Kershenbaum, J. T. Powers and Donald Chang, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p1006-1035. Optimal Design for Plate Buckling, W. R. Spillers and Robert Levy, ST Mar. 90, p850-858.

Refined Analysis of Load Distribution Factors for Bridges, M. A. Issa, Huiming Li, M. Arockiasamy, M. Shahawy and M. Issa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p260-263.

Stiffened Sheathings of Orthotropic Cylindrical Shells, P. Rigo, ST Apr. 92, p926-943.

Kigo, Si Apr. -X, py26-7-93.
Stochastic Analysis of Seasonal Hydraulic Conductivity,
Ram Gupta, Ramesh Rudra, Trevor Dickinson,
Naveen Patni and Greg Wall, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p32-38.

Fourier transform

Frequency Spectrum Analysis of Ultrasonic Testing Signal in Concrete, Wei-Du Li, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p104-114.

Application of Fracture Mechanics Methodology to Assessment of Weld Defects in Offshore Hatforms, T. M. Hsu, E. W. Carter, S. L. Fu and J. S. Mitchell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p733–749.

Compression Failure of Quasibrittle Material: Nonlocal Microplane Model, Zdeněk P. Bažant and Joško Ožbolt, EM Mar. 92, p540-556.

Ozzolt, EM Mar. 92, p340-356.
Computational Framework for 3D Nonlinear Discrete Crack Analysis, V. E. Saouma, R. W. Reich and J. Cervenka, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p788-791.
Determination of Critical J-Integral for Wood, Kirsti Riipola and Mikael Fonselius, ST July 92, p1741-1750.
Determination of Fracture Toughness for Wood, Mikael Fonselius and Kirsti Riipola, ST July 92, p1727-1740.
Experimental Validation of a Probabilistic Fracture Me-

Fonseius and Kirsti Kupola, \$1 July 92, p1721-1740. Experimental Validation of a Probabilistic Fracture Mechanics Model, Mircea Grigoriu and A. R. Ingraffea, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p443-446. Fracture Analysis of Mortar-Aggregate Interfaces in Concrete, Kwang Myong Lee, Oral Buyukozturk and Ayad Oumera, EM Oct. 92, p2031-2047.

Fracture Mechanics and Size Effect of Concrete in Ten-

Fracture Mechanics and Size Effect of Concrete in Ten-sion, Tianti Tang, Surendra P. Shah and Chengsheng Ouyang, ST Nov. 92, p3169-3185.

Thisa, A. M. Hammad and A. Chudnovsky, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130.

Fracture-Based Two-Way Debonding Model for Discon-tinuous Fibers in Elastic Matrix, Christopher K. Y. Leung, EM Nov. 92, p2298-2318.

Micromechanics Based Design for Pseudo Strain-

Leung, EM Nov. 92, p2298-2318.
Micromechanics Based Design for Pseudo Strain-Hardening in Cementitious Composites, Victor C. Li and H. C. Wu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p740-743.

743. A New Probabilistic Model for the Fracture Toughness of Concrete, M. A. Issa, M. Gorelik and A. M. Hammad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p467-470. Nonlinear Behaviour of Schneebeli Packings, Daniel Bideau, Jean-Paul Troadec and Claude Poirier, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p167-170.
Numerical Analysis of Discrete Nonlinear Fracture Mechanics, Walter H. Gerstle and Ming Xie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p784-787.

On the Role of Experimental Mechanics in Assessing the Performance of Concrete, Stuart E. Swartz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p119-122.

Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, Kwang W. Kim, Bong H. Lee, Je-Seon Park and Young S. Doh, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343.

Jean-Real-Time Condition Monitoring of Concrete Structures by Embedded Optical Fibers, Farhad Ansari, (Nonde-structive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), 949-59. Softening and Snap-Through Behavior of Reinforced Ele-ments, C. Bosco and A. Carpinteri, EM Aug. 92, p.1564-1577.

kability Theory of Cohesive Crack Model, Yuan N. Li and Robert Y. Liang, EM Mar. 92, p587-603. Study of Three Dimensional Crack Tip Location of Mor-tar by Acoustic Emission, H. L. Chen and C. T. Cheng, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p25-36.

Fracture strength
Determination of Critical J-Integral for Wood, Kirsti
Riipola and Mikael Fonselius, ST July 92, p1741-1750. Determination of Fracture Toughness for Wood, Mikael Fonselius and Kirsti Riipola, ST July 92, p1727-1740.

FORSEIUS AND KLIPGIA, ST JULY 92, p1727-1740. Estimating Damage and its Influence on Fracture Toughness, J. F. Labuz, L. Biolzi and C. N. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p523-526. Fracture Toughness for Steel Fiber-Cement Paste Interfacial Zone, Mitsunori Kawamura and Shin-ichi Igarashi, MT Aug. 92, p227-239.

Fracture Toughness Model of Fiber Reinforced Ceramics, Asher A. Rubinstein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p232-235.

Fracture Toughness of DMMC, Richard J. Arsenault, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p228-231.

M. Niedzwecki, ed., 1992), p228-251.
A New Probabilistic Model for the Fracture Toughness of Concrete, M. A. Issa, M. Gorelik and A. M. Hammad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p467-470.
Size, Temperature and Rate Effects on the Fracture Toughness of Saline lee, Samuel J. DeFranco and John P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p264-267.

Alternate Conceptual Model of Ground Water Flow at Yucca Mountain, Linda L Lehman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p310-320.

Analysis of Welded Tubular Connections Using Continuum Damage Mechanics, William F. Cofer and Jihad S. Jubran, ST Mar. 92, p828-845.

Juoran, S.I. Mar. 92, p828-843.
Basic Aspects of Damage Mesomodelling. P. Ladeveze and O. Allix, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p373-376.
Comparison of Two Conceptual Models of Flow Using the TSA, Michael L. Wilson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p882-890.

management rugatin Committee, 1927, p862-890.
Computerized Tomographic Analysis of Fluid Flow in Fractured Tuff, C. W. Felice, J. C. Sharer and E. P. Springer, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p296-299.

Cracking and Debonding on Bimaterial Interface under Uniform Loading, Mikiya Okumura, Norio Hasebe and Takuji Nakamura, EM June 92, p1113-1128.

and Takuji Nakamura, EM June 92, pl 113-1128.
Damage Assessment in Concrete Using Acoustic Emission, C. Ouyang, E. Landis and S. P. Shah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl 3-24.
Deterministic and Probabilistic Performance Assessment Methods Applied to Radionuclide Migration Through Fractured Geologic Medium, A. B. Gureghian, Y.-T. Wu and B. Sagar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p985-993.

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, John L. Smoot, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p345-351.

Estimating the Consequences of Significant Fracture Flow at Yucca Mountain, John H. Gauthier, Michael L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2021 2021 p891-898

Experimental and Theoretical Study of Flexural Behavior of Polymer Fiber Reinforced, Cement-Treated Soils, Robert Liang, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1080-1091.

Fatigue Strength of Riveted Bridge Members, John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981.

Fatigue/Fracture Reliability and Maintainability of Struc-tural Systems: A Method of Analysis, C. J. Kung and P. H. Wirsching, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p436-439.

Fiber Suppressed Localization in Tension, B. Mobasher and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-

Fracture Grouting with Bentonite Slurries, C. Ran and J. J. K. Daemen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p360-371.

Geochemical Model for <sup>14</sup>C Transport in Unsaturated Rock, Richard B. Codell and William M. Murphy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1959-1965.

Geoelectrical Tomography: Model Studies Related to Nu-clear Waste Site Characterization, Thomas E. Owen and Vernon R. Sturdivant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 9304-307.

Gravity-Driven Fingering in Unsaturated Fractures, M. J. Nicholl, R. J. Glass and H. A. Nguyen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p321-331.

High Resolution Seismic Imaging for Characterizing Fractures in Potential Sites for Nuclear Waste Reposi-tories, Ermest Majer, Larry Myer, John Peterson and Jung Mo Lee, (High Level Radioactive Waste Manage-ment, Jiigh Level Radioactive Waste Management Program Committee, 1992), p1111-1121.

Impact of Fracture Coatings on the Transfer of Water Across Fracture Faces in Unsaturated Media, David P. Gallegos, Steven G. Thoma and Douglas M. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p738-745.

The Impact of Thermal Loading on Repository Performance at Yucca Mountain, Thomas A. Buscheck and John J. Nitao, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1003-1017.

The Implications of Episodic Nonequilibrium Fracture-Matrix Flow on Site Suitability and Total System Per-formance, John J. Nitao, Thomas A. Buscheck and Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p279-296.

Numerical Modeling of Flow and Transport Phenomena in a Fractured Rock and Its Calibration Process, A. Ko-bayashi, R. Yamashita and Y. Moro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 463 70. Waste M p695-703.

A Numerical Study of Water Percolation through an Un-saturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, C. F. Tsang, J. Noorishad and F. V. Hale, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p304-309.

Prediction of Geological and Mechanical Processes While Disposing of High-Level Waste (HLW) Into the Earth Crust, O. L. Kedrovsky and V. N. Morozov, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p759-762.

1992), p759-762.

Properties of Aggregate-Cement Interface for High Performance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p852-855.

Settlement Reduction by Soil Fracture Grouting, Mario J. Pototschnik, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p398-409.

Strontium Isotope Geochemistry of Calcite Fracture Fillings in Deep Core, Yucca Mountain, Nevada—A Progress Report, Z. E. Peterman, J. S. Stuckiess, B. D. Marshall, S. A. Mahan and K. Futa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1582-1586. p1582-1586.

p1582-1586.
Three-Dimensional Fracture Process Zone Detection in Concrete, K. D. Basham, Y. C. Jean and K. P. Chong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedswecki, ed., 1992), p401-404.
Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, Paul G. Kapian, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1643-1646.
Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1196-1199.

Wetted-Region Structure in Horizontal Unsaturated Fractures: Water Entry Through the Surrounding Porous Matrix, R. J. Glass and D. L. Norton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p717-726.

p717-726.

Fractures, materials
Direct Tensile Test: Stability and Bifurcation, Zdeněk P.
Bažant and Luigi Cedolin, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p357-360.
Flow-Deformation Response of Dual-Porosity Media,
Derek Elsworth and Mao Bai, GT Jan. 92, p107-124.
Method for Simulating Tension Performance of Lumber
Members, Steven M. Cramer and William B. Fohrell,
ST Oct. 90, p2729-2746.
Optimization of Discontinuous Fiber Composites, Victor
C. Li, M. Maalej and T. Hashida, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,
ed., 1992), p1000-1003.
Strength and Fracture of Glass in the Lunar Environ-

co., 1992), p1000-1003.
Strength and Fracture of Glass in the Lunar Environment, Daniel D. Allen, W. Howard Poisl and Brian D. Fabes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1232-1239.

Fracturing

Fracturing
Durability of Armor Stone for Rubble Mound Structures,
Orville T. Magoon and W. F. Baird, (Durability of
Stone for Rubble Mound Breakwaters, Orville T.
Magoon, ed. and William F. Baird, ed., 1992), p3-4.
The Durability of Rubble Mound Armour in Service—A
Case Study, Terry Piggott, Sam Smith and Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed.,
1992), p23-42-67.
Mobile Continuous Lunar Excavation, John L. Paterson,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p107-1079.
Physical Model Testing of Broken Armor Stone, Donald
L. Ward, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird,
ed., 1992), p34-39.

ed., 1992), p34-39.

Recent Experience With Armor Stone Cracking in the Buffalo District, David W. Marcus, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p222-237.

U.S. Experience With Armor-Stone Quality and Performance, Richard J. Lutton, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p40-59.

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Inelastic Limit States Design. Part I: Planar Frame Stud-ies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

Inelastic Limit States Design. Part II: Three-Dimensional Frame Study, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2550-2568.

Framed structures

Approximating Lateral Stiffness of Stories in Elastic Frames, Arturo E. Schultz, ST Jan. 92, p243-263.

Functional Analysis in Continuum and Structural Mechanics, C. A. Nelson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992),

Geometrical Imperfections on Inelastic Frame Behavior, Eric M. Lui, ST May 92, p1408-1415.

Hedratecture in Severe Climates, Joseph J. Mangan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-170.

Hysteretic Response of Reinforced-Concrete Infilled Frames, Sinan Altin, Ugur Ersoy and Tugrul Tankut, ST Aug. 92, p2133-2150.

Incorporating Load Sharing in Shear Wall Design of Light-Frame Structures, Bohumil Kasal and Robert J. Leicht, ST Dec. 92, p3350-3361.

Incremental Collapse of Structures with Constant Plus Cyclically Varying Loads, Sidney A. Guralnick, Thomas Erber, Osama Soudan and Jixing He, ST June 91, p1815-1833.

Photo-Pissan Neural Networks Based Damage Detection in Structures, Zbigniew P. Szewczyk and Prabhat Hajela, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1163-1170.

Higgsi, etc., 1972f, p1163-1170.
Nonlinear Dynamic Response of Framed Structures
Using the Mode Superposition Method, Mohamed W.
Fahmy and Ahmad H. Namini, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p457-460.

Nonlinear Finite-Element Model for Light-Frame Stud Walls, B. Kasal and R. J. Leichti, ST Nov. 92, p3122-

Recorded Seismic Response of Pacific Park Plaza. II: Sys-tem Identification, E. Şafak and M. Çelebi, ST June 92, p1566-1589.

Reliability of Nonlinear Frame Structures by SFEM, Achintya Haldar and Yiguang Zhou, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p336-339.

Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Hsu and Apostolos Fafitis, ST Sept. 92, p2459-2474.

Seismic Response of Pacific Park Plaza. I: Data and Pre-liminary Analysis, M. Celebi and E. Şafak, ST June 92, p1547-1565.

Stability of Frames with Grade Beam and Soil Interac-tion, George Lin, EM Jan. 92, p125-139.

Structural System Design under Uncertainty Via Pareto Optimization, Dan M. Frangopol and Minoru lizuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p551-554.

Bracing Requirements of Plane Frames, Shyi-Lin Lee and P. K. Basu, ST June 92, p1527-1546.

Concurrent Optimization of Large Structures. I: Algorithms, Hojjat Adeli and Osama Kamal, AS Jan. 92, p79-90.

Concurrent Optimization of Large Structures. II. Applica-tions, Hojjat Adeli and Osama Kamal, AS Jan. 92, p91-110.

Confinement Steel Requirements for Connections in Ductile Frames, M. R. Ehsani and J. K. Wight, ST Mar. 90, p751-767.

Cyclic Behavior of Extended End-Plate Joints, Ahmed Ghobarah, Robert M. Korol and Ashraf Osman, ST May 92, p1333-1353.

Frame Buckling Analysis with Full Consideration of Joint Compatibilities, Yeong-Bin Yang and Shyh-Rong Kuo, EM May 92, p871-889.

Frame-Based Representation, Mary Lou Maher and Priti Vora, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p60-79.

Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, Catherine D. Perman and Leonard Ortolano, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.

eometrical Imperfections on Inelastic Frame Behavior, Eric M. Lui, ST May 92, p1408-1415.

Inelastic Limit States Design. Part I: Planar Frame Studies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

Modeling Slab Contribution in Frame Connections, B. M. Shahrooz, S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494.

New Stability Equation for Columns in Braced Frames, Raul Goncalves S., ST July 92, p1853-1870.

Reliability of Geometrically Nonlinear PR Frames, Achintya Haldar and Yiguang Zhou, EM Oct. 92, p2148-2155.

Reliability of Portal Frames With Interacting Stress Re-sultants, Luis Miguel da Cruz Simões, ST Dec. 90, p3475-3496.

Short-Term Behavior of Pultruded Fiber-Reinforced Plastic Frame, Ayman S. Mosallam and Lawrence C. Bank, ST July 92, p1937-1954.

Stochastic Dynamics of Hysteretic Systems, Lucia Faravelli and Paolo Venini, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p33-56.

Peaches and Concrete, Housh Rahimzadeh and Mark B. Haselton, CE Feb. 92, p42-44.

The Environment is Good Business in France, Virginia Fairweather, CE Mar. 92, p66-68.

Fauweather, 28 Mai. 24, pto-06.

Evolution of the French Policy Related to the Studies on Long-Lived Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p49-51.

French High-Level Waste Management Research and Development Program, J. P. Moncouyoux and C. G. Sombret, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409.

HLW Immobilization in Glass: Industrial Operation and Product Quality, P. Leroy, N. Jacquet-Francillon and S. Runge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p566-573.

Impact of HLW Thermal Output on Repository Design, J. L. Girotto, L. Chaudon and J. M. Hoorelbeke, (Hgh-Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), 9779-783.

1972), pt 1972, pt

### p510-516. Frazil ice

Innovative Intake Design for Raritan River, Paul Y. Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p220-225.

About Moving Contact Lines, Shih-An Yang and Allen T. Chwang, EM Apr. 92, p735-745.

Sluice-Gate Discharge Equations, Prabhata K. Swamee, IR Jan./Feb. 92, p56-60.

### Free surfaces

About Moving Contact Lines, Shih-An Yang and Allen T. Chwang, EM Apr. 92, p735-745.

Computational Model Verification Test Case Using Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p436-441.

Data Set for Verification of 3-D Free-Surface Hydrody-namic Models, Carquinez Strait, California, P. E. Smith, R. N. Oltmann and M. R. Simpson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p430-435.

Interaction of Steep Waves with Vertical Walls, D. Sen, WW Sept./Oct. 92, p453-473.

Kinematics of Nonlinear Random Waves near Free Sur-face, Sau-Lon James Hu and Dongsheng Zhao, EM Oct. 92, p2072-2086.

Momentum and Energy Coefficients Based on Power-Law Velocity Profile, Cheng-lung Chen, HY Nov. 92,

p1571-1584.

Numerical Model Verification by Prescribed Solution Forcing—A Test Case, Dick P. Dee, F. Mauricio Toro and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p416-

A Numerical Study of Kinematics of Nonlinear Water Waves in Three Dimensions, Hongbo Xü and Dick K. P. Yue, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p81-98.

Schwalt and Willi H. Hager, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p231-236.

A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

Bnowmik, ed., 1992), p494-499.
Two-Dimensional Flow in Embankments, Nazeer Ahmed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p636-641.
Vortex Suppression in Wet-Pit Pump Intakes, Tatsuaki Nakato, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p478-481.

### Freeze-thaw cycle

Seasonal Soil Strength by Spectral Analysis of Surface Waves, Bernard D. Alkire, CR Mar. 92, p22-38.

### Freeze-thaw durability

Freeze-thaw durability
The Assessment of Armourstone for Shoreline Protection,
R. Koopmans and R. B. Watts, (Durability of Stone for
Rubble Mound Breakwaters, Orville T. Magoon, ed.
and William F. Baird, ed., 1992), p82-94.
Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and
Failures, Thomas D. White, ed., 1992), p325-338.

Durability of MSW Fly-Ash Concrete, James R. Triano and Gregory C. Frantz, MT Nov. 92, p369-384.

Investigation of a Concrete Bilstering Failure, R. S. Rolings and G. S. Wong, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30.

Masonry Wall and Window System Leakage Investigation for University Building, John Frauenhoffer, CF May 92, p107-115.

Passive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Concretes, Michael A. Taylor, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl-12.

Permeability of Roller Compacted Concrete, Nemkumar Banthia, Michel Pigeon, Jaques Marchand and Jean Boisvert, MT Feb. 92, p27-40.

Boisvert, MT Feb. 92, p27-40.
Reliability-Based Design for Feeeze-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p462-475.
Santa Cruz Dam Modification, Megan Metcalf, Timothy P. Dolen and Paul A. Hendricks, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p459-475.

Preezing Coal Mine Waste Formation and Changes of Microstruc-ture Under Artificial Salting, Krystyna M. Skarzynska and Maria Porebska, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p60-70.

Concreting at Subfreezing Temperatures, Charles J. Korhonen, Edel R. Cortez and Brian A. Charest, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p382-397.

Effects of Freezing on Impact Properties of RTM Com-posites, and Their Applications in Offshore Structures, Gregory J. Pope and Vistasp M. Karbhari, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p828-839.

Estimating Thaw-Strain Settlement of Frozen Fill, G. Scott Crowther, CR Dec. 92, p152-159.

Scott Crowther, CR Dec. 92, p152-159.
Finite Element Analysis of Cold Embedments in Fresh Concrete, Daniel P. Swift, Jay A. Puckett and Thomas V. Edgar, CR June 92, p41-57.
Installation and Monitoring of Thermal Conductivity Suction Sensors in a Fine-Grained Subgrade Soil Subjected to Seasonal Frost, Walaa E. I. Khogali, Kenneth O. Anderson, Julian K. Gan and Delwyn G. Fredlund, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p153-167.
Measurement of Shock Pressure from FWD on a Con-

Measurement of Shock Pressure from FWD on a Con-crete Pavement by Impedance-Matched Shock Gauge, Plyush K. Dutta and John Kalafut, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228.

Future Impact of Trucking Reform on Railway Revenue, Ahmed M. Gadi and Afifi H. Soliman, TE Sept./Oct. 92, p729-743.

Freight transportation
Future Impact of Trucking Reform on Railway Revenue,
Ahmed M. Gadi and Afifi H. Soliman, TE Sept./Oct.
92, p729-743.

### Rail Revival, Paul Tarricone, CE Jan. 92, p36-39.

Case Studies of Structures with Man-Induced Vibrations, H. Bachmann, ST Mar. 92, p631-647. Frequency Domain Analysis of Undamped Systems, Eduardo Kausei and Jose M. Roësset, EM Apr. 92, p721-734.

Modal Synthesis Method for General Dynamic Systems, L. E. Suarez and M. P. Singh, EM July 92, p1488-1503. Seismic Response of Pacific Park Plaza. I: Data and Pre-liminary Analysis, M. Çelebi and E. Şafak, ST June 92, p1547-1565.

Prequency Based Control of Urban Blasting, Charles H. Dowding, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p181-211.

Frequency Domain Optimal Control of Wind-Excited Buildings, J. Suhardjo, B. F. Spencer, Jr. and A. Kareem, EM Dec. 92, p2463-2481.

Fundamental Frequency of Tapered Plates by Differential Quadrature, Anant R. Kukreti, Jalaleddin Farsa and Charles W. Bert, EM June 92, p1221-1238.

## Frequency analysis

3D Frequency Domain Analysis of Offshore Structures, J. F. McNamara and M. Lane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p192-195.

Dynamic Response Analysis of Pile Foundations by Using Variational Calculus, Toyoaki Nogami, Jian-Xiong Zhu and Takayoshi Ito, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p588-591.

A Frequency Surface for Rainfall Intensity and Duration, G. V. Loganathan and M. A. Parkin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p386-390.

# quency distribution

Definition of a Weighting Function for Rainfall in Aggregated Rainfall-Runoff Models, Paolo Bartolini and Juan B. Valdés, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p537-641.

Estimating Peak Flows from Small Agricultural Water-sheds, James V. Bonta and A. Ramachandra Rao, IR Jan./Feb. 92, p122-137.

Regional Frequency Analysis Using L-Moments, J. R. M. Hosking and J. R. Wallis, [Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed. 1992), p13-18.

240

Frequency response
Flexibility by Multireference Impact Testing for Bridge
Diagnostics, Madhwesh Raghavendrachar and Ahmet
E. Aktan, ST Aug. 92, p.2186-2203.
Frequency Response of Disordered Periodic Structures,
G. Q. Cai and Y. K. Lin, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1907, 2706-790.

1992), p796-799.

Measured to the Max, Robert Nigbor, Ahmet Cakmak and Robert Mark, CE Nov. 92, p44-47.

and Robert Mark, CE Nov. 92, p44-47.
Nondestructive Crack Identification by Acoustic Emission Analysis and Ultrasonic Frequency Response,
Masayasu Ohtsu and Yasunori Sakata, (Nondestructive
Testing of Concrete Elements and Structures, Farhad
Ansari, ed. and Stein Sture, ed., 1992), p171-181.
Stochastic Dynamics of Hysteretic Systems, Lucia
Faravelli and Paolo Venini, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p53-56.

### Fresh wat

Fresh water
Accurate Method for Calculation of Saturation DO,
Hesong Hua, EE Sept./Oct. 90, p988-990.
Modeling the Salinity "History" of Great Egg Harbor
Bay, New Jersey, Bryan Pearce, Howard McIlvaine, Ed
Simek, Pete Sucsy and Vibbu Vivek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p959-964.
Release Alternatives on a 3-D Salinity Simulation, Ber-

Bhownits, ed., 1992), p93-904. Release Alternatives on a 3-D Salinity Simulation, Bernard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p237-

Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saning a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.

Friction
Actively Controlled P-F Based Sliding Structures, Sohail M. Qureshi, Kiyoshi Uno and Hajime Tautsumi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.324-327.
Computer Simulation of Direct Shear Test, Jeen-Shang Lin, John M. Ting, Baliso Vuba and Shiou Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.425-428.
Computer Simulation of Dry Layered Granular Flow Down an Incline Composed of Grains, Chi-Hai Ling and Chyan-Deng Jan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.760-763.
Effects of Bottom Friction on Wave Breaking Using

p/00-703.

Effects of Bottom Friction on Wave Breaking Using RCPWAYE Model, Jerome P.-Y. Maa and S.-C. Kim, WW July/Aug. 92, p387-400.

Effects of Porous Bed on Turbulent Stream Flow above Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92, p1222-1240.

p1222-1240.

Failure Criteria Interpretation Based on Mohr-Coulomb Friction, D. V. Griffiths, GT June 90, p986-999.

Fracture Toughness Model of Fiber Reinforced Ceramics, Asher A. Rubinstein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p232-235.

Frictional Aspect of Rocking-Sliding of a Rigid Block with Surface Impact, Majid Shekarian, Joel P. Contact and Pol D. Spanos, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-

1331. Interface Friction of Polypropylene Straps, Meijiu Wei and Abdelmalek Bouazza, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1175-1187. Motion of Contact-Load Particles at High Shear Stress, Fidelia N. Nnadi and Kenneth C. Wilson, HY Dec. 92,

p1670-1684.

Multiple Modes of Steady-State Slide-Rock Response, Harry W. Shenton, III. and Nicholas P. Jones, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p312-315.

Simple and Accurate Friction Loss Equation for Plastic Pipe, R. D. von Bernuth, IR Mar./Apr. 90, p294-298. Slip Behavior of Cable against Saddle in Suspension Bridges, Koei Takena, Michio Sasaki, Kouichi Hata and Kazuo Hasegawa, ST Feb. 92, p377-391. Studies Related to Aircraft/Runway Friction Performance, Thomas J. Yager, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p64-71. Technique for Using Fine-Grained Soil in Painformed.

Technique for Using Fine-Grained Soil in Reinforced Earth, A. Sridharan, B. R. Srinivasa Murthy, Bin-dumadhava and K. Revanasiddappa, GT Aug. 91,

p1174-1190.

Jave Induced Vortex Near Seashore, Tai-Wen Hsu, Shan-Hwei Ou and Chun-Wei Sun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p466-469.

Wire Recovery Length in Suspension Bridge Cable, Mo-hammed Raoof and Yu Ping Huang, ST Dec. 92,

p3255-3267.

Friction coefficient, hydraulic Skimming Flow in Stepped Spillways, N. Rajaratnam, HY Apr. 90, p587-591.

HY Apr. 39, pos-252.

Friction factor

Dimensionally Homogeneous Manning's Formula, Ben
Chie Yen, HY Sept. 92, p1326-1332.

Modern Approach to Design of Grassed Channels, N.
Kouwen, IR Sept./Oct. 92, p733-743.

Resistance in Flat-Bed Sediment-Laden Flows, D. A. Lyn,
HY Jan. 91, p94-114.

Friction resistance
Effects of Viscosity on Migration of Spills of Hazardous
Liquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened ResourceIn Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992), p784-789.
Frictional Resistance of Overland Flow on Tropical
Turfed Stope, Yee-Meng Chiew and Soon-Keat Tan,
HY Jan. 92, p92-97.

Fritz, John

thigh's Fritz Laboratory is Civil Engineering Landmark, NE Oct. 92, p15.

Frost heave
Coal Mine Waste Formation and Changes of Microstructure Under Artificial Salting, Krystyna M. Skarzynska
and Maria Porebska, Utilization of Waste Materials in
Civil Engineering Construction, Hilary I. Inyang, ed.
and Kenneth L. Bergeson, ed., 1992), p60-70.

Frost penetration
Protected-Paste Volume of Air-Entrained Cement Paste.
Part 1, K. Natesaiyer, K. C. Hover and K. A. Snyder,
MT May 92, p166-184.

Froude number
Dividing Flow in Open Channels, Amruthur S.
Ramamurthy, Duc Minh Tran and Luis B. Carballada,
HY Mar. 90, p449-455.
Influences of Density on Circular Clarifiers with Baffles,
Siping Zhou, J. A. McCorquodale and Z. Vitasovic, EE
Nov./Dec. 92, p829-847.
Momentum and Energy Coefficients Based on PowerLaw Velocity Profile, Cheng-lung Chen, HY Nov. 92,
p1371-1584.

p1571-1584.

p1571-1584.

Optimum Channel Contraction for Supercritical Flows, P. Rutschmann, O. F. Jiménez and M. H. Chaudhry, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p754-759.

Stability Problems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p846-851.

Vedernikov's Number as a Measure of Flow Stability, Cheng-lung Chen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p753.

Frozen soils
Design Method for Frozen-Soil Retaining Wall, Sweanum Soo and B. B. Muvdi, CR June 92, p73-89.
Evaluation of Soil Water Sensors in Frozen Soils, John L. Nieber, John M. Baker and Egbert J. A. Spaans, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p169, 181

Instrumentation for Vehicle Mobility Testing in the Frost Effects Research Facility, Elisabeth Berliner and Sally Shoop, (Road and Airport Pavement Response Monito-ing Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p12-26.

Temperature-Independent Relationships for Frozen Soils, H. Wijeweera and R. C. Joshi, CR Mar. 92, p1-21.

COTEC), Luis A. Vega, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p152-

Facilitating Technology for Fuel Production and Energy-Enhanced Products, Patrick Takahashi, Charles Ki-noshita, Stephen Oney and Joseph Vadus, (Ocean En-ergy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p293-305.

Fuels
Alternative Fuels and Their Relations to TCM's for Santa
Barbara County, Mahesh Talwar, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992),
p327-346.

Canada Explores Sludge-to-Fuel Process, CE June 92, p18.

use Study—Elliott Bay Marina Floating Moorage, Craig S. Funston, (*Ports '92*, David Torseth, ed., 1992), p263-274.

p263-274.

Clean Fuels to Clean Up?, CE July 92, p11.

Diesel as Case of Consumer Choice in Alternative Transport Fuels, Joel R. Couse, EY Aug. 92, p95-108.

Engineering-Econometric Model of Energy Demand, Fabrizio Carlevaro, Jean-Lue Bertholet, Jean-Paul Chaze and Patrick Taffé, EY Aug. 92, p109-121.

The Feasibility of Processes for the Production of Oxygen on the Moon, Lawrence A. Taylor and W. David Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p752-762.

Improvement of Fuel Oil Contaminated Soils by Additives, Sibel Pamukcu and Hazem Hijazi, (Grouting, Soil Improvement of Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1285-1297.

Lunar He-3 Mining: Improvements on the Design of the

p123-1291. Lunar He-3 Mining: Improvements on the Design of the UW Mark II Lunar Miner, Igor N. Sviatoslavsky, (En-gineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1080-1091. Mare Via the Moone-A. Robust Lunar Resources-Based

Millet, ed., 1992.), p1080-1091.

Mars Via the Moon—A Robust Lunar Resources-Based Architecture, Ed Repic and Wally McClure, (Engineering, Construction, and Operations in Space III, Willy Z., Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1603-1630.

Rapid, Detection of Endoards Constitutions

Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl603-1630.

Rapid Detection of Hydrocarbon Contamination in Ground Water and Soil, A. M. Chrestman, G. in Ground Water and Soil, A. M. Chrestman, G. in Comes, S. S. Cooper and P. G. Malone, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl165-1170.

Robotic On-Orbit Fueling of SEI Vehicles, Margaret M. Clarke, David E. Haines and A. J. Mauceri, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl423-1433.

Robotics in SEI Terrestrial Launch Site Operations, Brian S. Yamamoto, A. J. Mauceri and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl464-1474.

Rocket Fuel to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl271-2281.

ed., Stein St p2271-2281.

Full-scale tests

Full-scale tests
An Alternative Analysis of Vibration Tests on Two Pile
Group Foundations, Alex Sy, (Piles Under Dynamic
Loads, Shamsher Prakash, ed., 1992), p136-152.
Dynamic Response Analysis of Reinforced-Soil Retaining
Wall, Muthucumarasamy Yogendrakumar, Richard J.
Bathurst and W. D. Liam Finn, GT Aug. 92, p1158-

Pile, Alex Sy and David Siu, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p170-186.

Instrumentation for a Full-scale Pavement Test in the Danish Road Testing Machine, Jørgen Krarup, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p96-111.

p96-111.
Inverse Analysis of Geotechnical Parameters on Improved Soft Bangkok Clay, Dennes T. Bergado, Apollo S. Enriquez, Casan L. Sampaco, Marolo C. Alfaro and A. S. Balasubramaniam, GT July 92, p1012-1030.
Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khaliif Farrag and Victor Elias, GT Jan. 90, p34-72.
Lateral Analysis of Piers Constructed on Slopes, Mohammed A. Gabr and Roy H. Borden, GT Dec. 90, p1831-1840.

1850.

1850.
Load and Temperature Measurements for a Study of Rutting Under High-Pressure Tires, William C. Dass, Susan M. Dass and James G. Murfee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212.
Measured to the Max, Robert Nighor, Ahmet Cakmak and Robert Mark, CE Nov. 92, p44-47.
Modified Stub-Girder Floor System: Full-Scale Tests, M. Ahmad, E. Y. L. Chien and M. U. Hosain, ST Nov. 92, p3222-3236.
Performance of Test Embankment Constructed to Failure on Soft Marine Clay, B. Indraratna, A. S. Balasubramaniam and S. Balachandran, GT Jan. 92, p12-33.
Producing Armourtstone Within Aggregate Quarries, Huanjin Wang, John-Paul Latham and Alan B. Poole, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p200-210.

p200-210.

Validation of the SEADYN90 Cable Simulation Model Using a Three-Dimensional Cable Deployment Data Set, Paul A. Palo, Linda C. Teragouchi and Maureen T. Smith, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p273-287.

Functional analysis
Elastic Buckling of Rectangular Plates with Curved Internal Supports, K. M. Liew and C. M. Wang, ST June 92, p1480-1493.

Functional Analysis in Continuum and Structural Mechanics, C. A. Nelson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p514-518.

p314-518. System Engineering and Risk, Brian W. Mar, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p304-310. Systems-Engineering Methodology for Engineering Panning Applications, Brian G. Hoefler and Brian W. Mar, El Apr. 92, p113-128. Unsteady Drawdown of Water Table, M. Emin Savci, IR July/Aug. 90, p508-526.

unding allocation Fueding allocations
Addressing Bridge Scour When Funding Falls Short, John N. Paine, Robert J. Leedy, Jr. and James N. Wigfield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p204-209.
Condon Adds 12 Projects to Joint-Venture Program, CE Nov. 92, p27.
Education Issues in 1992, Casey Dinges, CE Feb. 92, p114.

p114.

p114.
Funding of Wastewater Reuse Systems Under the Federal
Small Reclamation Projects Act, Robert B. Hamilton,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p702-706.
Huge Transportation Bill Signed by Bush; States Will
Have Flexibility in Spending Federal Funds, NE Jan.

92, pl.
NSF Coalitions Hope to Revolutionize Education, CE

June 92, p24,27. PMSC: Pavement Management System for Small Com-munities, Amir Tavakoli, Mitchell S. Lapin and J. Ludwig Figueroa, TE Mar/Apr. 92, p270-280. Transportation Bill Revises Federal Policy. Casey Dinges, CE Jan. 92, p106.

Water-Projects Bills, Casey Dinges, CE May 92, p122.

Furrow Irrigation
Furrow Flow Velocity Effect on Hydraulic Roughness,
Thomas J. Trout, IR Nov/Dec. 92, p981-987.
Furrow Geometric Parameters, Thomas J. Trout, IR
Sept/Oct. 91, p613-634.

Hydrodynamic Furrow Irrigation Model with Specified Space Steps, E. Bautista and W. W. Wallender, IR May/June 92, p460-465. Simulating the Effects of Deficit Irrigation for Furrow Systems, J. M. Enciso, D. L. Martin, D. E. Eisenhauer and N. L. Klocke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p244-249.

Two-Dimensional Analysis of Furrow Infiltration. T.

Two-Dimensional Analysis of Furrow Infiltration, T Vogel and J. W. Hopmans, IR Sept./Oct. 92, p791-806.

Furrow systems

Mathematical Zero-Inertia Modeling of Surface Irrigation: Advance in Furrows, Gerd H. Schmitz and
Günther J. Seus, IR Jan./Feb. 92, p1-18.

Fuzzy sets
Design-Basis Flood for Rehabilitation of Existing Dams,
Anand Prakash, HY Feb. 92, p291-305.
Effect of Active Control to Structural Reliability, J. T. P.
Yao and H. G. Natke, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p373-376.

19921, p.3/3-3/0.
Evaluation of Failure Potential in Mudstone Slopes Using Fuzzy Sets, Der-Her Lee and C. Hsein Juang, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.1137-1151.

p1137-1151.

Fuzzy Measures in the Knowledge Based Diagnosis of Seismic Vulnerability of Masonry Buildings, Alberto Bernardini, Roberto Gori and Claudio Modena, (Probabilistic Mechanics and Siructural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28.

Knowledge Based System with Uncertainty for the Soil, Cherif Boulemia, Daniel Boissier and Jihad Al-Haijar, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p365-368.

Machine Leaving in Planning and Control Shaporei Lin, Machine Leaving in Planning and Control Shaporei Lin.

cal Reliability, V. K. Lin, ed., 1992), p365-368.

Machine Learning in Planning and Control, Shaopei Lin, Zhenyi Zhao and Yingjian Soong, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p991-998.

Mapping Slope Failure Potential Using Fuzzy Sets, C. H. Juang, D. H. Lee and C. Sheu, GT Mar. 92, p475-494.

Methodology for Evaluating Dredged Maternal Alternatives Using Risk-Cost Analysis Under Uncertainty, J. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p236-259.

Rationalizing Water Requirements with Aid of Fuzzy Allocation Model, Janusz Kindler, WR May/June 92, p308-323.

p308-323.

p308-323.

Scheduling Demand-Responsive Transportation Vehicles Using Fuzzy-Set Theory, Shinya Kikuchi and Robert A. Donnelly, TE May/June 92, p391-409.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, Co June 92, p303-317.

Session Report—Natural and Man-Made Hazards and Risk of Estreme Events, Jim Lambert, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, p538-339.

Unified Pavement Distress Index for Managing Flexible Pavements, C. H. Juang and S. N. Amirkhanian, TE Sept./Oct. 92, p686-699.

Gabious

Flow and Energy Dissipation Over Stepped Gabion Weirs, L. Peyras, P. Royet and G. Degoutte, HY May 92, p707-717.

Gabions and Geogrids, Alfred H. Brand, CE Sept. 92, p65-67.

Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. I. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

Garages
Costs, Schedule Shrink as Airport Garage Expands, CE
Mar. 92, p10,12.

mait. 24, 101.0. Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p363-372.

Gas flow
Gas Transfer in Diffused Bubble Plumes, Steven C.
Wilhelms and Sandra K. Martin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, 1993, 212, 222

tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p317-322.
Gas-Transfer Measurements Using Headspace Analysis of Propane, John R. Thene and John S. Gulliver, EE Nov./Dec. 90, p1107-1124.
Influence of Gas Phase Turbulence on the Transport of Particles, Jennifer L. Sinclair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042.

Gas formation

An Event Size Probability Distribution for Risk Analysis,
James D. Englehardt, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p232-237.

Gas pipelines

Evaluation of Erosion Potential at Pipeline Crossings,
David T. Williams, Samuel Carreon, Jr. and Jeffrey B.

Bradley, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marihall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p689-694.

Gasoline

Analytical Prediction of Gasoline Thickness on the Water
Table, M. Yavuz Corapcioglu, Rajasekhar Lingam and
Vern K. Haisler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p254259.

259.

Effects of Soil Moisture and Physical-Chemical Properties of Organic Pollutants on Vapor-Phase Transport in the Vadose Zone, Say Kee Ong, Theresa B. Culver, Leonard W. Lion and Christine A. Shoemaker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179.

Electroosomotic Removal of Gasoline Hydrocarbons and TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

and Matthew T. Walsh, EE Jan.Feb. 92, p68-83. ingerprint Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluorescence, Daniel York Pharr, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p579-584.

Gates
Container Terminal Gates Flexible Design for a Dynamic
Environment, Larry Nye, (Ports '92, David Torseth,
ed., 1992), p912-925.

ed., 1992), p912-923.

Design of Control Algorithm for Operation of Irrigation Canals, J. Mohan Reddy, Amadou Dia and Ahmed Oussou, IR Nov/Dec. 92, p852-867.

Incorporating Hydraulic Structures in an Open-Channel Model, Eric D. Swain, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), a1118-1129. p1118-1123.

pi116-1123. uice-Gate Discharge Equations, Prabhata K. Swamee, IR Jan./Feb. 92, p56-60. ransients in Canal Network, Rajeev Misra, K. Sridharan and M. S. Mohan Kumar, IR Sept./Oct. 92, p690-707.

Gaussian process

Analog Electronic Simulations of a Nonlinear System, R. Valery Roy and Eric Nauman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p668-671.

Sampling Theorem to the Representa-

1992), p668-671.

Application of the Sampling Theorem to the Representation of Random Fields, Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p33-36.

Load-Space Formulation for Time-Dependent Structural Reliability, R. E. Melchers, EM May 92, p853-870.

Numerical Differentiation Using Gaussian Quadrature, B. L. Ly, EM Nov. 90, p2568-2572.

On the Approximated Solution of Non-Linear Systems Under Non Gaussian Excitations, G. Falsone and My Vasta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p140-143.

Response of Systems with Uncertain Parameters to Stochastic Excitation, H. Jensen and W. D. Iwan, EM May 92, p1012-1025.

92, p1012-1025.

Simulation of Improved Gaussian Time History, Loren D. Lutes and Jin Wang, EM Jan. 91, p218-224.

Slepian Process of a Non-stationary Process, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p296-299

Geodesy Beyond Push-Button GPS, Alfred Leick, CE June 92.

elineating Theory for GPS Surveying, Alfred Leick, SU May 92, p33-42.

p75-76.
Delineating Theory for GPS Surveying, Alfred Leick, SU May 92, p33-42.

Geographic Information systems
Automated Delineation of Catchment Area Boundaries with TINs, Norman L. Jones and James Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p347-352.

Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G. Balog, William P. Stack, Kenneth T. Belt and Nathan J. Bell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503.

Beyond GIS: The Integrated Spatial Information System, Lania Rivamonte, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p825-822.

Combined Allocation and Operation Model, Wytze Schuurmans and Wil N. M. van der Krogt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p269-274.

A Comparison of Geographical Information Systems, Carl E. Kurt, Khurshid Mohyuddin and Bo Guo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p8726-89-8, 1260pp.
Construction Applications of Relational Data Bases in Three-Dimensional GIS, Amr A. Oloufa, C. S. Papacostas and Reynaldo Espino, CP Jan. 92, p72-84.

Decision Support System for Multiobjective Service Route Design, Jin-Yuan Wang and Jeff R. Wright, ed., 1992, p9-16.

Developing Infrastructure Lifecycle Solutions, Steven B. Glimpse and Jeffrey M. Young, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

Developing Infrastructure Lifecycle Solutions, Steven B. Glimpse and Jeffrey M. Young, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

1992), pol-6-624.
Drainage Analysis Using Triangulated Irregular Networks, Norman L. Jones and James Nelson, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p719-726.

Wright, ed., 1992), p719-726.
Engineering Answers to Groundwater Impact Questions
Using a Geographic Information System (GIS), Paul E.
Albertson and Albert N. Williamson, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p505-510.
Estimating Urban and Suburban Sewerage Flows with Assistance of GIS Technology, Paul Kirshen, Daniel
Nvule and John Corliss, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p208-212.

Search of Solutions, Monammad Karamouz, ed., 1992), p208-212.

Finite Element Modeling of Storm Water Runoff Using GRASS GIS, Baxter E. Vieux and James Westervelt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p712-718.

GEIS: A Geographic Information System for the Earth Sciences, Robert D. Regan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Trogram Committee, 1992), p833-838.

Geographic Information Systems in Earthquake Hazard Analyses, J. David Frost, Jean-Lou A. Chameau and Ronaldo Luna, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p452-459.

Geographic Information Systems—Evolutionizing the Decision Making Process, Dennis H. Klein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1204-1211.

Geographical Information System (GIS) Technology in Global Environmental Evaluation—An Overview, Robert C. Lozar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2104-2127.
GeoLink: Integrating GIS and GPS for Land Use Planning, Road Mapping, and Environmental Analysis, Douglas Richardson and Thad Mauney, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.325-327.
Geotechnical Data Management: A GIS-Based Approach, Amr A. Olouda and Ahmed A. Eltahan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.590-597.
GIS Analysis of Routes for Transportation of Hazardous Materials, Baxter E. Vieux and Madhusudan V. Kalyanapuram, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.168-173.
A GIS Based Synthetic Watershed Sediment Routing Model, Roger H. Smith, Surya N. Sahoo and Larry W. Moore, (Water Resourcer Planning and Management: Saving a Threatened Resource- In Search of Solutions, Mohammad Karamouz, ed., 1992), p.200-207.
GIS Conference Highlights Broadly Focused Systems, CE July 92, p.22.

Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p200-207.
GIS Conference Highlights Broadly Focused Systems, CE July 92, p22.
GIS Conference Highlights Broadly Focused Systems, CE July 92, p22.
GIS for Land Management, Majed Khalfallah, Salah Benabdallah, Naceur Chemam and Rached M'Hadbi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p929-933.
GIS for Transportation and Air Quality Analysis, Reginald R. Souleyrette, Shashi K. Sathisan, David E. James and Soon-tin Lim, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p182-194.
GIS: New York's Pipe Dream, Harvey P. Moutal, David R. Bowen and Wendy Dorf, CE Feb. 92, p66-67.
GIS, Remote Sensing, and Master Water Plan: A Case Study, Uzair M. Shamsi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p695-702.
A GIS-Based Regional Risk Approach for Bridges Subjected to Earthquakes, Seong H. Kim, Michael P. Gaus, George Lee and K. C. Chang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p460-467.
GPS/Positioned Digital Video for Airborne GIS Data Acquisition, Brent Wanless, SU Aug. 92, p80-89.
Ground-water Policy-making Support: USEM Optimization Modeling Plus GIS and Graphics, Richard C. Peralta, Christopher M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza, Douglas Ramsey and Kurt Vest, (Irrigation and Dairiange: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p305-310.
Hotel-Casino Trip Generation Analysis Using GIS, Reginald R. Souleyrette, Shashi K. Sathisan and Emelinda M. Parentela, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p52-56.
How to Implement GIS: Tools and Procedures, Robert Information System, Nageshwar R. Bhaskar, Wesley P. James and

92, p492-512

92, p492-512.
Information Management in Water Resources: Database and GlS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Water Resource Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Karamoux, ed., 1992), p1-6.
Information Management in Water Resources: Database and GlS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Hydraulic Engineering: Saving a Threatened Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374.
Integrated GlS Solutions with Civil Engineering Projects, Jerry W. Williams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p328-331.

Integrating Facility Delivery through Spatial Information, Teresa M. Adams, Alan P. Vonderohe, Jeffrey S. Russell and James L. Clapp, UP Mar. 92, p13-23. Integration of AM/FM/GIS with MODELING/DESIGN on Large Utility PC Network, J. Darrell Bakken and Charline M. Avey, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

Charline M. Avey. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

An Introduction to GIS, Lowell Kent Smith and Tracy Lenocker, CC Nov. 92, p1-6.

Irrigation and Drainage System As-Built Map Preparation Using Satellite Digital Imagery and a GIS, Christopher M. U. Neale and Lymann S. Willardson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p311-316.

Leveraging the Use of Geographic Information Systems in Highway Corridor Studies, David D. Metcalf and Mark R. Urban, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p174-181.

LGG System for Emergency Response Applications, Anthony A. Saka, SU Aug. 92, p90-98.

Linking GIS with Hydrologic Modeling, Barry Evans, Jefrey Grimm, Larry Thornton and Paul Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p499-304.

Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p532-589.

Modeling Variable Width Buffer Zones with a Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p532-589.

Nodeling Variable Width Buffer Zones with a Geographic Information System Gary Ostroff, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p523-589.

Not Just Talking About the Weather, CE June 92, p11.

A PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Edin Howlett and Daniel L. Mendelsohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Kaiph Cheng, ed. and Grig Swanson, ed., 1992), p102-109.

A Shell Approache to Modeling Oil Spiil Trajectory and Fate and Search and Rescue

unrougn Barriers, Yihua Xiong and Jerry B. Schneider, UP June 92, p65-79.
Sludge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar./Apr. 92, p196-208.
Small Utility Gls. Didier Goubert and Robert Newton, CE Nov. 92, p69-71.
Solid Waste Travel Demand Model Using GlS and Simulation for Evaluating Site Impacts, Erin K. Bashaw and P. A. Koushki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p185-189.
Sources of GlS Data, Lowell Kent Smith and Tracy Lenocker, CC Nov. 92, p.7-8.
Start-Ups, CE July 92, p11.
Storm Water Utility Case Study, Salt Lake City, Utah, Charles H. Call, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p792-797.

Strategies for Groundwater Model Application Through GIS, David S. Ward, Robert M. Greenwald and P. Srinivasan, (Hydraulic Engineering: Saving a Threa-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p32. Timely Technology: GIS Use in the U.S., CC Nov. 92, p12-13.

p12-13.
Unit Hydrograph Derivation Using Geographic Information System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12.

Use of a Geographic Information System for the Highway Design Review Process, Hosin Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p153-160.

ed., 1992), p153-160.

Use of GIS for Resource Management in Hong Kong, Jan R. Selwood and Peter G. D. Whiteside, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p942-949.

Use of GIS Technology for the Analysis and Visualization of Arsenic Concentration in Soils, Irene Findikaki, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p443-451.

Using Geographic Information Systems for Traffic Control Inventory Management, Gary S. Spring, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1-8.

Using GIS To Locate Salinity on Irrigated Soils, Dennis

Using GIS To Locate Salinity on Irrigated Soils, Dennis L. Corwin, Mark Sorensen and James D. Rhoades, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p468-475.

Water Planning Using an Expert GIS, Daene C. McKinney, David R. Maidment and Mustafa Tanriverdi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p219-224.

mau Karamouz, ed., 1992), p219-224.
Water's New World, Laura Lang, CE June 92, p48-50.
Watershed Models for Resources Management Decisions,
Alan M. Lumb, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p884889.

Geography

The Physiography and Engineering Constraints of the Continental Slope in the Northwestern Gulf of Mexico, William R. Bryant and Gregory R. Simmons, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p1036-1050.

Orthometric Heights from Global Positioning System, Jerome Fiedler, SU Aug. 92, p70-79.

Geologic mapping
High-Resolution Interwell Seismic Experiments in Sedimentary Formations, Jorge O. Parra and Brian J. Zook,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1923), p519-532.

Zunil 1 Landsiide and Landslide Hazard, Gerald R. Thiers, Alan Benfer, Luis Merida and Richard Grass, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p205-221.

Geologic processes

Deterministic Geologic Processes and Stochastic Modeling, Christopher A. Rautman and Alan L. Flint, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1617-1624.

Geological faults

Geological faults
Earthquake Hazard Investigative Procedures for Central
United States Waterworks, James R. Blacklock, (Lifeline Earthquake Engineering in the Central and Eastern
U.S., Donald B. Ballantyne, ed., 1992), p1-15.
Fault Stress Analysis for the Yucca Mountain Site Characterization Project, S. J. Bauer, M. P. Hardy, R. Goodrich and M. Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), p2267-2277.

Geoelectrical Tomography: Model Studies Related to Nuclear Waste Site Characterization, Thomas E. Owen and Vernon R. Sturdivant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p304-307.

Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p304-307.

A Geologist's Perspective on Dam Foundation Grouting, Kenneth D. Weaver, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p639-650.

High Resolution Seismic Imaging for Characterizing Fractures in Potential Sites for Nuclear Waste Repositories, Ernest Majer, Larry Myer, John Peterson and Jung Mo Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Tyocca Mountain, Nevada, K. J. Coppersmith and R. R. Youngs, (High Level Radioactive Waste Management Program Committee, 1992), p1111-1121.

Modeling Fault Rupture Hazard for the Proposed Repository at Yucca Mountain, Nevada, K. J. Coppersmith and R. R. Youngs, (High Level Radioactive Waste Management Program Committee, 1992), p1142-1150.

On the Response of Earth Dams Subjected to Earthquake Fault Rupture, Jonathan D. Bray, Raymond B. Seed and H. Bolton Seed, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p608-624.

Potentially Active Faults in Dam Foundations (Paper introduced by Clarence R. Allen), J. L. Sherard, L. S. Cluff and C. R. Allen, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p204-266.

Surface Motion Due to Stochastic Plane Sources in a Layered Medium, Y. Yong and J. Yu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p184-187.

Geological surveys

Can the Kristallin-1 Near-Field Model he Considered Bro.

Geological surveys
Can the Kristallin-I Near-Field Model be Considered Robust? I. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1770-1776.

1992), p1770-1776. 
Geological Mappability of Bored Versus Drill and Blast Excavations for Radioactive Waste Repositories, Bjorn Nilsen and Levent Ozdemir, (High Level Radioactive Waste Management Program Committee, 1992), p1499-1506. 
Site Characterization and the Method of Multiple Working Hypotheses, David F. Fenster, K. Michael Cline, John A. Blair and Jane Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p751-754.

p/31-734.

Telerobotic Field Geologist: Preliminary Results of a Feasibility Study, Robert E. Cole, Charlotte Albert-Thenet, G. Jeffrey Taylor, Paul Johnson, Forrest Buzan, Joy Ishigo and Curtis Ikehara, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 434-1442.

Geology
Apollo II limenite Revisited, E. N. Cameron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2423-2433.

nenficiation of Lunar Rocks and Regolith: Concepts and Difficulties, Lawrence A. Taylor and David S. McKay, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1058-1069.

Miller, ed., 1992), p1058-1069.

Design Criteria for an Underground Lunar Mine, John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1183-1194.

Developing a Functioning Visualization and Analysis System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management Program Committee, 1992), p846-851.

Earthflow Evaluation and Control: A Case History, Michael R. Thomas and Alan L. Kropp, (Stability and Performance of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864. Extraterrestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillett and David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1048-1057.

GEIS: A Geographic Information System for the Earth Sciences, Robert D. Regan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive National Report of State of Page 1992, p633-838.

Icon-Based Concept for Exploring Rover Autonomy, J. H. Allton and Damian Lyons, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2400-2411. The Importance of the Site for the Safety of a Repository for Spent Nuclear Fuel in Sweden, Tonis Papp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2136-2144.

1992), p2136-2144.
Landslide Hazard Analysis for Pipeline Design, Northeast Utah, Jeffrey R. Keaton, Robert M. Robison and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204.
Needed Geologic and Seismic Rulemaking for HLW Repositories, Jay L. Smith, (High Level Radioactive Waste Management Program Committee, 1992), p685-690.
New Approaches for Regional Ground-Water Modeling.

Management Program Committee, 1992), p685-690. New Approaches for Regional Ground-Water Modeling in Southern Nevada, A. Keith Turner and Kenneth E. Kolm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p852-858. An Overview of the Yucca Mountain Global/Regional Climate Modeling Program, Robert P. Sandoval, Yugal K. Behl and Starley L. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1188-1195. Waste Man p1188-1195.

philos-1173.

House H. Cornforth and D. Andrew Vessely, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p310-324

p310-324. rediction of Geological and Mechanical Processes While Disposing of High-Level Waste (HLW) Into the Earth Crust, O. L. Kedrovsky and V. N. Morozov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p759-762.

Quantifying Uncertainty in Site Characterization, William J. Boyle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Quantitative Comparison Between Colloidal and Solute Transport, J. Y. Chung and K. J. Lee, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1966-1971.

pl 900-1971.

Releases From Exotic Waste Packages from Partitioning and Transmutation, William W.-L. Lee and Jor-Shan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 387-1396.

The Role of Engineering Geology in Slope and Embank-ment Stability Analysis, Richard W. Galster, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1921.)

Seismic Survey Considerations in the Planning and Design of Dredging Projects for Marine Terminal Facilities, Charles J. Natale, Jr., Thaddeus A. Nowak, Jr. and Bruce A. Adams, (Ports '92, David Torseth, ed., 1992). Bruce A. p456-469.

Stability Analysis in Geomechanics by Linear Programming. I: Formulation, Poon-Hwei Chuang, GT Nov. 92, p1696-1715.

Temporal and Spatial Distribution of Basaltic Volcanism misoral and Spatial Distribution of Basaltic Volcanism in the Pancake and Reveille Ranges North of Yucca Mountain, K. A. Foland and S. C. Bergman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2366-2371.

Geometric nonlinearity

Nonlinear Geometric and Material Considerations in Shell Structures, S. A. Schimmels and A. N. Palazotto, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p548-551.

Thin-Walled Space Frames. I: Large-Deformation Analysis Theory, Hong Chen and George E. Blandford, ST Aug. 91, p2499-2320.

ASG COGO, Brian Brenner and Dennis Njuguna, CC Mar. 92, p1,4-6.

Classification of Jointed Rock with Emphasis on Grout-ing, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p449-460.

Furrow Geometric Parameters, Thomas J. Trout, IR Sept./Oct. 91, p613-634.

Geometric Characterization of Road Humps for Speed-Control Design, T. F. Fwa and L. S. Tan, TE July/Aug. 92, p593-598.

Geometric Modeling of Inflatable Structures for Lunar Base, Paul S. Nowak, Willy Z. Sadeh and Loretta A. Morroni, AS July 92, p311-322.

Geometrical Imperfections on Inelastic Frame Behavior, Eric M. Lui, ST May 92, p1408-1415.

Modeling the Salinity "History" of Great Egg Harbor Bay, New Jersey, Bryan Pearce, Howard McIlvaine, Ed Simek, Pete Sucsy and Vibbu Vivek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p959-964.

BRIOWHIR, CO., 19721, PS79-790.
Numerical and Analytical Description of Highway Surface Roughness, Ton-Lo Wang, Mohsen Shahawy and Dongzhou Huang. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p309-316.

Optimum Geometries for Pier-Type Airport Terminals, S. Bandara and S. C. Wirasinghe, TE Mar./Apr. 92, p187-206.

Systolic Anterior Motion of the Mitral Valve: In Vitro Flow Studies, Xavier P. Lefebvre, Shengqiu He, Robert A. Levine and Ajit P. Yoganathan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p701-704

Use of Fractal Geometry Concepts in the Simulation of Ground Water Flow and Transport Processes, Angelos N. Findikakis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p33-38.

Use of Machine Vision in Bedform Studies, Peter A. Mantz and Wenxue Li, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992). p840-845.

Geomorphology

Geomorp cougy
Assessment of Derived Flood Frequency Distributions, Timothy H. Raines and Juan B. Valdes, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p268-273.

Design of Protective Dunes at Dam Neck, Virginia, John R. Headland, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p251-267.

A. nugues, ed., 1992, p. 23-201.
Geomorphic and Hydraulic Factors Affecting Stream Stability at New York Thruway Bridges, Sufian A. Khondker, Keith E. Giles, Carl J. Montana and Mark A. Hixson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p912-918.

Hydraulic and Geomorphic Classification of the Upper Mississippi River System: Pilot Study of Three Pools, Nani G. Bhowmik and Renjie Xia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions), Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p666-671.

The Lathrop Wells Volcanic Center: Status of Field and Geochronology Studies, B. Crowe, R. Moriey, S. Wells, J. Geissman, E. McDonald, L. McFadden, F. Perry, M. Murrell, J. Poths and S. Forman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p1997-2013.

Small Stream Classification—A Process Based Approach, Jeffrey B. Bradley and Peter J. Whiting, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p695-700.

Successful Interactions Between Hydraulic Engineering and Geomorphology in Identifying Flood Hazard Areas in the Southwestern United States, Richard H. French and Jeffrey R. Keaton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p581-586.

Use of Fractal Geometry Concepts in the Simulation of Ground Water Flow and Transport Processes, Angelos N. Findikakis, (Hydraulic Engineering: Saving a Threatened Resource—In Search O'Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p33-

Geophysical surveys
The Small Mars Rover, A. L. Kemurdjian and V. V. Gromov, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p390-397.

Georgia Analysis of the Georgia Dome Cable Roof, Gerardo Castro and Matthys P. Levy, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p566-573.

p30b-3/3.
Application of SMA Technology in Georgia, Rober Ronald Collins and Steve Fernando Valdez, (Materials Performance and Prevention of Deficiencies an Failures, Thomas D. White, ed., 1992), p16b-171.

Failures, Thomas D. White, ed., 1992), p160-171. Geosynthetics
The Behavior of Reinforced Soil Walls Constructed by Different Techniques, A. McGown, K. H. Loke and K. T. Murray, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1237-1248.
A Computer Program for the Analysis of Reinforced Soil, F. Reyna, D. Humphrey, B. Christopher and J. L. Chameau, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1225-1236.
A Cushy Job for Landfill Liners, CE Dec. 92, p8.
A Design Method for Reinforced Clay Embankments on

A Design Method for Reinforced Clay Embankments on Soft Foundations, Glen A. Roycroft, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1481-

1492.
Design of Anchored Geosynthetic Systems for Slope Stabilization, Roman D. Hryciw and Kamarudin Haji-Ahmad, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 464-1480.
Design of Geosynthetic-Reinforced Soil Structures, Kh. Farrag and I. Juran, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 188-1200.
Dynamic Interface Shear Strength Properties of Geomembranes and Geotextiles, M. K. Yegian and A. M. Lahlaf, GT May 92, p760-779.
Finite Element Analysis of a Geogrid Reinforced Soil

M. Lahlaf, GT May 92, p760-779.
Finite Element Analysis of a Geogrid Reinforced Soil Wall, Richard J. Bathurst, Rajagopal Karpurapu and Peter M. Jarrett, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1213-1224.
Geosynthetic Reinforced Soil Structures, Dov Leshchinsky and Ralph H. Boedeker, GT Oct. 89, p1459-1478.
Geosynthetic Strength—Ultimate and Serviceability Limit State Design, R. J. Fannin and S. Hermann, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boullanger, ed., 1992), p1411-1426.
Geotechs Study Soil Modification Menu, CE May 92,

Geotechs Study Soil Modification Menu, CE May 92,

p17-18. Geo-forouting. Soil Improvement and Geosynthetics, Geo-technical Special Publication No. 30, 2 vols, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, 0-87262-865-5, 1480pp. Hydraulic Conductivity of Three Geosynthetic Clay Liners, Paula Estornell and David E. Daniel, GT Oct. 92, p1592-1606.

74. pt.392-1606. Interface Friction of Polypropylene Straps, Meijiu Wei and Abdelmalek Bouazza, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pt.175-1187. Laboratory Model Study on Geosynthetic Reinforced Soil Retaining Walls, I. Juran and B. Christopher, GT July 89, p905-926.

Landfill-Cover Conflict, Teresa Austin, CE Dec. 92, p70-

Pavement Improvement with Asphaltic Membranes, llan Ishai, Nathan Livnat and Moshe Livneh, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1067-1079.

Permeation of Organic Chemicals Through HDPE Geomembranes, Joni P. Sakti, Jae K. Park and John A. Hoopes, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p201-207.

Pullout Stiffness of Elastic Anchors in Slope Stabilization Systems, Roman D. Hryciw and Masyhur Irsyam, GT June 92, p902-919.

June 92, p902-919.

Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.

Remaining Technical Barriers to Obtain General Acceptance of Geosynthetics, Robert M. Koerner, Yick Hsuan and Arthur E. Lord, Jr., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p63-109.

Seismic Anlaysis and Design of Lined Waste Fills: Current Practice, Raymond B. Seed and Rudolph Bonaparte, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p152-1545.

Soft Clay Subgrade Stabilization Using Geocells, S. Y.

Soft Clay Subgrade Stabilization Using Geocells, S. Y. Mhaiskar and J. N. Mandal, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1092-1103.

Stability of Embankments over Weak Soils of Limited Thickness, Radoslaw L. Michalowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1142-1152

Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.

ubaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744.

Geotschnical engineering
Biotechnical Stabilization of Cut & Fill Slopes, Donald H.
Gray and Robbin B. Sotir, (Stability and Performance
of Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p1395-1410.
Biotechnical Stabilization of Highway Cut Slope, Donald
H. Gray and Robbin B. Sotir, GT Sept. 92, p1395-

Clay Strengthened for Boston Harbor Project, CE Nov. 92, p14.

Computational Laboratory for Discrete Element Geome-chanics, John M. Ting and Brent T. Corkum, CP Apr. 92, p129-146. Corps Unveils New Levee Repair Method, CE Aug. 92, p19-20.

Extended Kalman Filter-Finite Element for Geotechnical Problems, Masaru Hoshiya and Atsushi Sutoh, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p128-131.

Finite Element Analysis in Geotechnical Engineering, Jonathan D. Bray, Ross W. Boulanger, Soon Hue Chew and Raymond B. Seed, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417.

p410-417.
GEIS: A Geographic Information System for the Earth Sciences, Robert D. Regan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p833-838.
Geotechnical Data Management: A GIS-Based Approach, Amr A. Oloufa and Ahmed A. Eltahan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p590-597.
Geotechnober: An Environment of Change Lean-Yee.

Geotechnology: An Environment of Change, Jean-Yves Perez, CE Dec. 91, p44-45.

eotechs Revisit Slopes, Embankments, CE Sept. 92, p28-29.

Geotechs Study Soil Modification Menu, CE May 92, p17-18.

Global Change: Geoengineering and Space Exploration, Lyle M. Jenkins, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2072-2081.

Grouting, Soil Improvement and Geosynthetics, Geo-technical Special Publication No. 30, 2 vols, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, 0-87262-865-5, 1480pp.

Necessary Redundancy in Geotechnical Engineering, Jorj O. Osterberg, GT Nov. 89, p1511-1531.

O. Osterberg, GT Nov. 89, p131-1531.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, Dinesh C. Gupta, Jacob Philip, Loren J. Lorig and Asadul H. Chowdhury, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p212-219.

Old Problems and New Challenges in Marine Geotechnical Engineering, Wayne A. Dunlap, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1051-1069.

Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp.

Regolith Dynamics, Mohammed M. Ettouney and Haym Benaroya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1379-1388.

Some Modeling and Analysis Techniques for Wave Propagation in Random Media, Georges A. Bécus, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p377-380.

Start-Ups, CE Jan. 92, p11.

Start-Ups, C.E. Jan. 92, p.11.
Two New Specialty Geotechnical Processes for Slope Stabilization, Donald A. Bruce, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.1505-1519.
Underground Research: Here and There, Raymond L. Sterling, CE Dec. 92, p.56-58.

Versatile Data Managing, Amin Rahman, CC June 92, p1-6.

Wanaque Filtration Plant Subgrade Stabilization—A Case History, Joseph D. Chastanet and Paul M. Blaki-ta, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p265-274.

Geotechnical models Model Uncertainty Representation in Geotechnical Reli-ability Analyses, Knut O. Ronold and Peter Bjerager, GT Mar. 92, p363-376.

Geotextiles

Biotechnical Stabilization of Cut & Fill Slopes, Donald H. Gray and Robbin B. Sotir, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1395-1410.

Centrifuge Models of Clay-Lime Reinforced Soil Walls, Erol Güler and Deborah J. Goodings, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1249-

Consistency and Fairness in Geotextile Specifications, C. Joel Sprague and Marshall Gaddy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p288-298.

The Evolution of Geotextile Reinforced Embankments, C. Joel Sprague and Michael Koutsourais, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992). p1129-1141.

Finite Element Analysis of Slopes with Layer Reinforce-ment, Robert M. Ebeling, John F. Peters and Reed L. Mosher, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1427-1443.

Geotextile Helps Tailor Old Rail Bed for New Use, CE Jan. 92, p83.

Mathematical Characterization of Fabric and Its Use in Mechanics of Geomaterials, B. Muhunthan and J. L. Chameau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p725-728.

A New Design Chart for Reinforced Embankments, M. Soubra, C. Coulet and D. Rakotondramanitra, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1163-1174.

Remaining Technical Barriers to Obtain General Acceptance of Geosynthetics, Robert M. Koerner, Yick Hsuan and Arthur E. Lord, Jr., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p63-109. Subaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744. Two Full Size Structures Reinforced by Geotestiles, Ph. Delmas, Ph. Gotteland, J. P. Gourc and S. Haïdar, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1201-1212.

248

German Cask-Concept for Intermediate and Final Storage of Spent Fuel, K. Janberg, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p385-394.

The German Participation in the Soviet MARS 94/96

gram Committee, 1992), p385-394.
The German Participation in the Soviet MARS 94/96
Mission, Klaus Proetel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2293-2304.
Knowledge-Based Systems in Structural Engineering in Germany, Nikolaus Fleischmann and Martina Schnellenbach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p558-565.
The New Munich Airport—Planning, Construction and Opening of a New International Turnstile Airport in Europe, Willi Hermsen, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p148-154.

1992), p148-154.

1992, p148-124.
Safety Analysis for Waste Transports to the Planned Final Waste Repository KONRAD, F. Lange, D. Gründler and G. Schwarz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p421-426.

System Selection of Concepts for Direct Disposal of Spent Fuel, K. Einfeld, K. D. Closs and U. Knapp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1860-1866.

Giardiasis

Light-Scatter Particle Counting: Improving Filtered-Water Quality, Carrie M. Lewis and David H. Manz, EE Mar./Apr. 91, p209-223.

Gibbs, William R.

Bill Gibbs, Former ASCE President, Dies at 73, CE June 92, p82.

Girders

Behavior of Concrete-Graphite/Epoxy Sections in Composite Bridge Girders, F. Gordaninejad, M. Saiidi and N. Wehbe, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709.

Buckling of Suspended Cambered Girders, Walter L. Peart, Edward J. Rhomberg and Ray W. James, ST Feb. 92, p505-528.

Evaluating Damage Detection in Bridges, David F. Mazurek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p944-947.
Girders Separate Tunnel from New Milwaukee Jail, CE Dec. 92, p22.

Manufactured Wood Joists—Noncollapse Failure, Theo-dore G. Padgett, Jr., CF Feb. 92, p58-64. Optimum Design of Composite Hybrid Plate Girders, Balaur S. Dhillon and Chen-Hsing Kuo, ST July 91,

p2088-2098. Parametric Study of Continuous Prestressed Composite Girders, Wenxia Tong and Hamid Saadatmanesh, ST Jan. 92, p186-206.

Performance of Viaduct Girders under Static and Dy-namic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Post-tensioned Cables Have Stabilized Before (ltr.), Robert A. Fischman, CE July 92, p32.

Shear Resistance Models for Concrete Bridges, Ahmed S. Yamani and Andrzej S. Nowak, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p809-811.

Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-504.

Glacial till
Soil Nailing: A Simplified Kinematic Analysis, R. John
Byrne, Grouting, Soil Improvement and Geosynthetics,
Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p751-764.

The Behavior and Effects of the Noble Metals in the DWPF Melter System, Nick D. Hutson and Mike E. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 9541-548.

Commissee, 19721, D341-548.
Borosilicate Glass (a.n.) Sources Used With Origen-Type Calculations, O.W. Hermann and R. Salmon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1272-1280.

179-21, p12/2-1280.
Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561.
A Commandation of Glasse Reaction at High and Low SA W.

Committee, 1992), p557-561.

A Comparison of Glass Reaction at High and Low SA/V: PCT Vs. MCC-1, William L. Ebert and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p934-942.

Comparison of Micromechanical Models for Elastic Properties, Cliff J. Lissenden and Carl T. Herakovich, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1309-1322.

Densification/Creep Behavior of Experimental Glass-Ceramic Waste Forms for Immobilization of High-Level Calcined Waste at the Idaho Chemical Processing Plant, Krishna Vinjamuri, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p300-303.

The Development and Testprogram of Transport and

Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p300-303.

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.

Disposal of Failed Melters from Defense Waste Vitrification Facilities, P. J. Brackenbury, J. King and E. C. Norman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2381-2386.

Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, Kanwar Rai, M. S. Kumra and A. N. Prasad, (High Level Radioactive Waste Management Program Committee, 1992), p899-903.

Evaluations of Glass Vitrification Techniques on Iron Ratio Determinations, R. B. Spencer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2399-2405.

First-Order Model for Durability of Hanford Waste

p2399-2405.

First-Order Model for Durability of Hanford Waste Glasses as a Function of Composition, Pavel R. Hrma, Gregory F. Piepel, Michael J. Schweiger and Donald E. Smith. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1236-1243.

HLW Immobilization in Glass: Industrial Operation and Product Quality, P. Leroy, N. Jacquet-Francillon and S. Runge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p566-573.

Hydrogen Generation During Treatment of Simulated

Hydrogen Generation During Treatment of Simulated High-Level Radioactive Waste with Formic Acid, J. R. Zimen, ik and C. W. Hsu, High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), when the Management of Management of Management Program Committee, 1992, when the Management of M p549-556.

p349-536.
Initial Comparison of Leach Behavior Between Fully Radioactive and Simulated Nuclear Waste Glasses Through Long-Term Testing. Part 1. Solution Analysis, Xiangdong Feng and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p925-933.

py25-933. Lunar Oxygen—The Reduction of Glass by Hydrogen, Carlton C. Allen, David S. McKay and Richard V. Morris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p629-640.

Mixed Broken Glass Processing Solutions, Nathiel G. Egosi, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p71-80.

Phase Stability of Simulated Nuclear Waste Glasses, I. Joseph, T. V. Palmiter and L. D. Pye, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p911-916.

p. 11-916.

A Pilot Scale Demonstration of the DWPF Process Control and Product Verification Strategy, Nick D. Huson, Carol M. Jantzen and D. Chris Beam, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 525-532.

Projected Compositions and Radiogenic Properties of DWPF Glasses, J. R. Fowler and M. J. Plodinec, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p904-910.

Quality Assurance at a High Level Waste Plant—The Successful Approval of WVP, Sellafield to BSS882/ ISO9002, Tim Houghton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p562-565.

The Remote Monitoring of Waste Glass Melter Product, K. K. Li and A. Schneider, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p533-540.

Sintering of Lunar Glass and Basalt, Carlton C. Allen, Joy A. Hines, David S. McKay and Richard V. Morris, (En-gineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-1218.

Some Aspects Concerning the Design of High Level Waste Vitrification and Storage Facilities, V. A. Kurnosov, M. V. Strakhov, V. T. Sorokin and A. E. Kozlov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2387-2394.

mittee, 1972, p.236-2394.
Strength and Fracture of Glass in the Lunar Environment, Daniel D. Allen, W. Howard Poisl and Brian D. Fabes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1232-1239.

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, S. L. Marra, R. E. Edwards and C. M. Jantzen, (High Level Radioactive Waste Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924.

Transportation, Interim Storage, and Disposal Alterna-tive for Vitrified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

Vacuum Melting and Mechanical Testing of Simulated Lunar Glasses, J. E. Carsley, J. D. Blacic and B. J. Plet-ka, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1219-1231.

Waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing Plant, Krishna Vinjamuri, Swami V. Raman, Dieter A. Knecht and James D. Herzog, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1261-1271.

Waste Glass and Sewage Sludge Frit Use in Asphalt Pavements, Warren H. Chesner, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p296-307.

## Glass fibers

Behavior of Externally Confined Concrete Columns, M. W. Li, H. Saadatmanesh and M. R. Ehsani, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p677-690.

Bond Strength of Straight GFRP Rebars, S. Tao, M. R. Ehsani and H. Saadatmanesh, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p598-605.

Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Glass-Fiber Reinforcing Rod: Characterization and Ap-plication to Concrete Structures and Grouted Anchors, O. Chaallal and B. Benmokrane, (Materials: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p606-617.

Glass plates

Properties of PVB Interlayer Used in Laminated Glass, C. V. Girija Vallabhan, Y. C. Das and Manjunatha Ramasamudra, MT Feb. 92, p71-76.

Global positioning
Beyond Push-Button GPS, Alfred Leick, CE June 92, p75-76.

Delineating Theory for GPS Surveying, Alfred Leick, SU May 92, p33-42. GPS/Positioned Digital Video for Airborne GIS Data Acquisition, Brent Wanless, SU Aug. 92, p80-89.

Integrated GPS-INS for High-Accuracy Road Positioning, M. E. Cannon, SU Nov. 92, p103-117.

Laptop Automated Navigation Aid Positioning System with Differential GPS, Charles F. Klingler, Michael R. Wroblewski and Scott Krammes, SU Nov. 92, p130-

LGG System for Emergency Response Applications, Anthony A. Saka, SU Aug. 92, p90-98.

Orthometric Heights from Global Positioning System, Jerome Fiedler, SU Aug. 92, p70-79.

Start-Ups, CE June 92, p11.

Reinforced Concrete Beams with Plates Glued to Their Soffits, Deric John Oehlers, ST Aug. 92, p2023-2038.

Goals

Project Management: Keys to Success, David Bentley and Gary Rafferty, CE Apr. 92, p58-59. Reservoir Management and Thermal Power Generation, Barbara J. Lence, M. Imran Latheef and Donald H. Burn, WR July/Aug. 92, p388-405.

Roller Compacted Concrete Tailing Retention Dam, Daniel L. Johnson, Nigel A. Skermer and Frank Bergstrom, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p181-197.

Golden Gate Bridge
Probing the Golden Gate, Mark A. Ketchum and Al Hel-dermon, CE June 91, p42-45.

Gould is One of Moles Awardees for 1992, CE Feb. 92, p72-73.

Government

Fordice Elected Mississippi Governor, Card Joins President Bush's Cabinet, NE May 92, p16.

Government agencies, NE May 92, p16.

Government agencies
The ACR Issue Resolution Process, David K. Zabransky,
Michael S. Alissi and Michael H. Schwartz, (High Level
Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),
p173-177.

Data Needs for Locating Emergency Response Units, George F. List, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p437-441.

Program Committee, 1992), p431-441.

The DOE Office of Environmental Restoration and Waste Management Comprehensive Integrated Planning Process, Richard J. Aiken, Cyril W. Draffin, Jr. and Karl T. Pflock, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1555-1558.

Enhancing the Partnership—Improving Public Awareness Through Education and Information, Carol L. Hanlon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1794-1798.

Experience with Spent Fuel Storage Licensing, Frederick C. Sturz, Ralph H. Sievers and John R. Stokley, *High Level Radioactive Waste Management*, High Level Radioactive Waste Management Program Committee, 1992), p220-227.

Facility Interface Capability Assessment, Thomas E. Pol-log, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p178-182.

High-Level Waste Package Retrievability, Thomas W. Doering and David Stahl, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p362-365. Information Management for the Department of Energy Office of Civilian Radioactive Waste Management, Barbara A. Cerny, (High Level Radioactive Waste Management, Program Committee, 1992), p2078-2082. Interfacing the Existing Cask Fleet with the MRS or Fitting Round Pegs Into Square Holes, J. W. Doman and R. E. Hahn, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p189-1895. Lessons Learned from Utility NRC Licensing Experience, Jay E. Silberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Licensing Code-of-Practice, Leonard T. Skoblar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Committee, 1992), p1055-1061.

1992), p1055-1061.

250

1992), p1055-1061.

Licensing Issues: Clarification and Convergence, John P. Roberts, Linda J. Desell, Mary L. Birch, Lester Berkowitz and Joseph F. Bader, (High Level Radioactive Waste Management, High Level Radioactive Waste Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, Kenneth P. Baskin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p691-694.

verseas Perspectives for Managing Irrigation Drainage in California, Emery M. Roe, IR May/June 91, p350-

360.

Perspectives on the Science Advisor Program at Sandia National Laboratories, P. C. Bennett, R. B. Heath, A. Podlesny and P. A. Channon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1826-1831.

Realizing Opportunity Horizons: DOE's Records Information Systems Design Efforts, Daniel J. Graser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2098-2105.

Roadmaps: An Effective Issue-Based Planning Process.

1992), p2098-2105.
Roadmaps: An Effective Issue-Based Planning Process, Cyril W. Draffin, Jr. and A. Nick Suttora, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Trogram Committee, 1992), p1567-1571.
RW-859—A Key Link Between Government and Utilities, Mary Lee Payton and Kathleen Gibbard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1281-1286.

1992), p1281-1286

1992), p1.281-1286.
U.S. Department of Energy Issue Resolution Process, Maxwell B. Blanchard, Michael D. Voegele and Miguel A. Lugo, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1062-1066.

Government employees
Group Gets Board Backing for Policies of Benefit to Government Engineers, CE May 92, p80-81.

erment Engineers, CE May 92, p80-81.

Government policies
City and County of Denver Approach to Management
Requirements, Ginger S. Evans, (International Air
Transportation: A New International Airport, Robert E.
Boyer, ed., 1992), p164-169.
Elements of Effective State Land-Use Pianning Policy,
Arthur C. Nelson, UP Sept. 92, p97-105.
Engineering-Econometric Model of Energy Demand, Fabrizio Carlevaro, Jean-Lue Bertholet, Jean-Paul Chaze
and Patrick Taffé, EY Aug. 92, p109-121.
The Environment is Good Business in France, Virginia
Fairweather, CE Mar. 92, p66-68.
Impact of Water-Quality Policies on Water Availability,
Thomas S. Maddock, El Oct. 90, p333-344.
An Integrated Approach to Strategic Planning in the Ci-

Thomas S. Maddock, El Oct. 90, p.333-344.

An Integrated Approach to Strategic Planning in the Civilian High-Level Radioactive Waste Management Program, William M. Sprecher, Jonathan Katz and Richard J. Redmond, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1559-1564.

Lessons Not Learned from 1989 Loma Prieta Earthquake, Ghassan Tarakji, El Apr. 92, p.132-138.

Perspectives on the Science Advisor Program at Sandia National Laboratories, P. C. Bennett, R. B. Heath, A. Podlesny and P. A. Channon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1826-1831. Session Summary—Risk Communication and Perception, Robert O'Connor, (Risk-Based Decision Making in Water Resources V, Yacov V, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p348-349.

349.
349.
A Setback for Set-Aside Contracts, Michael C. Loulakis and William L. Cregger, CE July 92, p44.
Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p511-516.
Water Use in Saudi Arabia: Problems and Policy Implications, Abdulla Ali Al-Ibrahim, WR May/June 90, n375-382.

Government role
Building a Space Infrastructure: The Reclamation Experience, Stephen L. Gillett, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p69-77.
Democracy and Expertise: The Story of Ringhals 3 in Sweden, Göran Sundqvist, (High Level Radioactive Waste Management Program Committee, 1992), p166-172.
Keeping the Public in Public Works Facility Planning, Margaret B. Umphres, Flisa Stevenson, Sara M. Katz and Robin Spear, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p238-243.
A Novel University-Industry-Government Partnership, Constantine N. Papadakis, Paul C. Claspy, Theo G. Keith and Michael J. Salkind, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), Seven Legal Strategies to Cool Global Warming, Ray Jay

paracel 33. Even Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p511-516.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p33-38.

Grade control structures

Analysis of ARS Low-Drop Grade-Control Structure,
Steven R. Abt, Mark R. Peterson, Chester C. Watson
and Scott A. Hogan, HY Oct. 92, p1424-1434.
Scour Downstream of Grade-Control Structures, Noel E.
Bormann and Pierre Y. Julien, HY May 91, p579-594.

Computational Gradient Plasticity, R. de Borst, H. -B. Mühlhaus and J. Pamin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p776-779.

The Transverse Vortex in the Wall Regions of the Turbu-lent Boundary Layers in the Flows with Adverse Pres-sure Gradient, Q. X. Lian and T. C. Su, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p474-477.

Graduate study

An Ocean Engineering Program for the 21st Century, L. S. Fletcher and J. E. Flipse, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p370-380. To Specialize, Engineers Must Return to School, CE Mar. 92, p30.

92, p.30. Upgrading the First Professional Degree, Louis L. Guy, Jr., El Oct. 92, p345-348. Waste Caretakers: Who Will They Be? A. Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1485-1490.

Grain size

Hydraulic Conductivity of Noncohesive Soils, B. Åberg, GT Sept. 92, p1335-1347. Incipient Motion during Static Armoring, Anders Worman, HY Mar. 92, p496-501.

Mouting of Heterogeneous Sediments over Movable Bed: Model Development, Andre van Nickerk, Koen R. Vogel, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p246-262.

Routing of Heterogeneous Sediments over Movable Bed: Model Verification, Koen R. Vogel, Andre van Niek-erk, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p263-279.

Crola storage
Design and Performance of Two Port Silos on Improved
Ground, M. U. Ergun, (Grouting, Soil Improvement
and Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p842-854.

Grains
Bin-Wall Failure Caused by Eccentric Discharge of FreeFlowing Grain, R. A. Bucklin, S. A. Thompson and I. J.
Ross, ST Nov. 90, p3175-3190.
Computer Simulation of Dry Layered Granular Flow
Down an Incline Composed of Grains, Chi-Hai Ling
and Chyan-Deng Jan, (Engineering Mechanics, Loren
D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
p760-763.

p760-763.

Granular materials

Boundary Shear Stress and Roughness Over Mobile Alluvial Bods, Peter J. Whiting and William E. Dietrich, HY Dec. 90, p1495-1511.

Characterization of Granular Material Composite Structures Using Computerized Tomography, Xiaogong Lee, William C. Dass and Charles W. Manzione, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p268-271.

Compaction Quality Control in Granular Shell of Earl Dam, Panaghiotis C. Kotzias and Aris C. Stamatopoulos, GT Aug. 92, p1247-1255.

Computer Simulation of Dry Layered Granular Flow Down an Incline Composed of Grains, Chi-Hai Ling and Chyan-Deng Jan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p760-763.

D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p760-763.
Computer Simulation of Granular Flows, Thomas G. Drake, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p752-755.
Constitutive Equation for Granular Material by Hypoelasticity, R. K. Mysore and W. E. Falby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p733-736.
Constitutive Modeling for Material with Perfect Disordered Heterogeneity, X. Lee and C. S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p445-448.
Elastoplastic Deformation for Particulates with Frictional Contacts, Ching S. Chang, Anil Misra and Kofi Acheampong, EM Aug. 92, p1692-1707.
Experimental and Theoretical Dynamic Compliances of Foundations, Ronald Y. S. Pak and Bojan B. Guzina, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p596-599.
Explicit Equations of Motion of Discrete System of Disks in Two Dimensions, Oleg Vinogradov, EM Sept. 92, p1850-1858.

Explicit Equations of Motion of Discrete System of Disks in Two Dimensions, Oleg Vinogradov, EM Sept. 92, p1850-1858.

Fabric Related Probabilistic Model for Granular Materials, Jamshid Jahedi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p473-478.

Instability of Slopes with Nonassociated Flow, Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p288-291.

Mathematical Model for Piping, M. A. Koenders and J. B. Sellmeijer, GT June 92, p943-946.

Mechanics of Granular Materials at Very Low Effective Stress Levels, Stein Sture, Nicholas C. Costes and David F. McTigue, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1038.

Micromechanical Simulation of Wave Propagation in

p1035-1038. Micromechanical Simulation of Wave Propagation in Dense Granular Assemblies, J. S. Lee, M. Y. Ma and A. B. Huang, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p417-420. Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. I: Theory, Ching S. Chang, Yang Chang and Mohammed G. Kabir, GT Dec. 92, p1959-1974.

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, Ching S. Chang, Mo-hammed G. Kabir and Yang Chang, GT Dec. 92,

(1973-1972.) dodeling the Chaotic Behavior in Simple Shear Granular Flows, Jan-Olov Aidanpää, Hayley H. Shen and Ram Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1031-1034.

The Morphology and Dynamics of Natural and Laboratory Grain Flows, Richard R. McDonald and Robert S. Anderson, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p748-751. Particle Analysis of Material Behavior—A Note on Continuum Assumptions, John R. Williams, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p179-183.

Pattern Formation and Time-Dependence in Flowing Sand, R. P. Behringer and G. W. Baxter, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1028-1030.

Probabilistic Micromechanics in Constitutive Modeling

Niedzwecki, ed., 1992), p1028-1030.

Probabilistic Micromechanics in Constitutive Modeling of Granular Material, Ching S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p437-440.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166.

Shear-Band Analysis in Idealized Granular Material, J. P. Bardet and J. Proubet, EM Feb. 92, p397-415.

A Sobere Moving Down an Inclined Bumpy Surface, Chy-

Daruet and J. Proubet, EM Feb. 92, p397-415.

A Sphere Moving Down an Inclined Bumpy Surface, Chyan-Deng Jan, Hsieh Wen Shen, Chi-Hsi Ling and Cheng-lung Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-771.

771.
Static Instability and Liquefaction of Loose Fine Sandy Slopes, Poul V. Lade, GT Jan. 92, p51-71.
Stress Transfer Within Granular Geomaterials, Gabriel Auvinet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p159-162.
Unconfined Granular Materials Thermalized by Fluctuating Horizontal Surfaces, Mark W. Richman and Richard E. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p900-903.

Void Ratio of Noncohesive Soils and Similar Materials, B. Aberg, GT Sept. 92, p1315-1334.

Granular media
Analysis of Membrane Penetration in Triaxial Test,
Steven L. Kramer, N. Sivaneswaran and R. O. Davis,
EM Apr. 90, p773-789.
Application of NMR to Rotating Granular Flow, M. Nakagawa and E. K. Jeong, (Engineering Mechanics, Loren
D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
p644-647.
Discrete Mechanics of Schiller Mechanics (1992).

p044-647.

Discrete Mechanics of Sediment Transport, Peter K.

Haff, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), p756-759.

Dynamic Compaction Analysis, Y. K. Chow, D. M. Yong,
K. Y. Yong and S. L. Lee, GT Aug. 92, p1141-1157.

Dynamic Stresses in Granular Assemblies with Microstructural Defects, A. Shukla, C. Y. Zhu and Y. Xu,
EM Jan. 92, p190-201.

Granular Elew on a Bumpy Inclined Chute, Mariian Ba-

Granular Flow on a Bumpy Inclined Chute, Marijan Ba-bić, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1024-1027.

John M. Niedzwecki, ed., 1992, p.1024-1027.
Membrane Compliance and Liquefaction of Sluiced
Gravel Specimens, Mark D. Evans, H. Bolton Seed and
Raymond B. Seed, GT June 92, p856-872.
Nonlinear Behaviour of Schneebeli Packings, Daniel
Bideau, Jean-Paul Troadec and Claude Poirier, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p167-170.

Beckneth Editor.

Phosphorus Removal by Automatic Backwash Filters at Back River WWTP, George G. Balog, Manu A. Patel, Thomas N. Lash and Christian Davies-Venn, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p24-29.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166. Reinforced Sand Behavior Overlying Compressible Subgrades, Gerald P. Raymond, GT Nov. 92, p1663-1680.

Strain-Softening Behavior of Granular Soil in Strain-Path Testing, J. Chu, S.-C. R. Lo and I. K. Lee, GT Feb. 92. Testing, J. p191-208.

Wavefront Propagation in Random Granular Media, Martin Ostoja-Starzewski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p384-387.

Graph theory Graph-Theory Approach to Eigenvalue Problem of Large Space Structures, A. S. S. R. Reddy, AS Jan. 92, p70-78.

ate-Space Analysis and Control of Slow Transient Pipes, Masashi Shimada, HY Sept. 92, p1287-1304.

Graphical analysis Mechanism of Biological Treatment in Plug-Flow or Batch Systems, Hasan Ali San, EE July/Aug. 92, p614-

6.28. A PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Eoin Howlett and Daniel L. Mendelsohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p489-500.

1992), p489-900.
Techniques for Visualization of Estuarine and Coastal Flow Fields, S. E. Rennie and J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p48-55.

Graphite fibers

Comparison of Micromechanical Models for Elastic Properties, Cliff J. Lissenden and Carl T. Herakovich, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 309-1322.

Graphs for Hydraulic Design of Sanitary Sewers, Venka-teswarlu Swarna and Prasad M. Modak, EE May/June 90, p561-574.

Graphs, charts
Design Charts for Timber Beam-Columns, Ramon RibsRamirez and Mehrdad Soltani, ST Feb. 92, p596-602.

Frictional Resistance of Overland Flow on Tropical Turfed Slope, Yee-Meng Chiew and Soon-Keat Tan, HY Jan. 92, p92-97.

Gravel
Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p533-554.
Damage of Entryway Stairs due to Settlement of Gravel Backfill, Robert W. Day, CF May 92, p121-124.
Darcy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, IR Jan/Feb. 92, p104-112.
Dracy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p747-752.
Gravel Equilibrium Beach Design for Agreeting Short

ravel Equilibrium Beach Design for Arresting Shore Erosion at Flathead Lake, Montana, Steven L. Da Costa, Joseph L. Scott and David P. Simpson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p154-169.

pl34-109.

Hydraulic Conductivity of Noncohesive Soils, B. Åberg, GT Sept. 92, pl335-1347.

Investigation of Mackay Dam Following the 1983 Borah Peak Earthquake, Leslie F. Harder, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p956-972.

Loop Rating Curves from Goodwin Creek, Roger A. Kuhnle and Andrew J. Bowie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p741-746.

Mean Size Distribution of Bed Load on Goodwin Creek, Roger A. Kuhnle and Joe C. Willis, HY Oct. 92, p1443-1446.

pl 443-1446. Membrane Compliance and Liquefaction of Sluiced Gravel Specimens, Mark D. Evans, H. Bolton Seed and Raymond B. Seed, GT June 92, p836-872. Mitigation of Harbor Caused Shore Erosion with Beach Nourishment Delayed Mitigation, St. Joseph Harbor, Ml, Charles N. Johnson, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p137-153. Model Study of Jet-Circulated Grit Chamber, Asher Brenner and Mordechai H. Diskin, EE Nov./Dec. 91, p782-787.

Modeling Strength of Sandy Gravel, Richard J. Fragaszy, James Su, Farhat H. Siddiqi and Carlton L. Ho, GT June 92, p920-935.

Post-Earthquake Slope Stability of Two Dams with Liq-uefied Gravel Foundations, D. W. Sykora, J. P. Koes-ter, R. E. Wahl and M. E. Hynes, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005.

Surface Sampling of Dry and Underwater Sediment De-posits, Jon Fripp and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

An Analysis of Human Performance in Simulated Par-tial-Gravity Environments, Nathan R. Moore and David J. Gutierrez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2282-2292.

Artificial Gravity Augmentation on the Moon and Mars, Les Schultheis, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p 1738-1747.

Bed-Load Transport on Transverse Slope. I, Masato Sek-ine and Gary Parker, HY Apr. 92, p513-535.

Gravity-Driven Fingering in Unsaturated Fractures, M. J. Nicholl, R. J. Glass and H. A. Nguyen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992). p321-331.

p321-331.

LIAC: A Closed Ecosystem Research Facility, Derek E. Shipley, Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1765-1776.

Mechanics of Granular Materials at Very Low Effective Stress Levels, Stein Sture, Nicholas C. Costes and David F. McTigue, (Engineering Mechanica, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1038.

Medical Care on the Moon, Ron Schaefer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1728-1737.

Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, Kuanchung J. Lin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p216-219.

Outpost Service and Construction Robot (OSCR), Steven Kent, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1434-1463.

Regolith Mechanics, Dynamics, and Foundations, Mo-hammed M. Ettouney and Haym Benaroya, AS Apr. 92, p214-229.

## Gravity foundations

Probabilistic Stability Analysis for Deep-Water Founda-tion, Knut O. Ronold and Steinar Bysveen, GT Mar. 92, p394-405.

Upper Bound Limit Analysis of Deep Skirt Structures' Foundations, Andrew V. Maller and James D. Murff, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p571-584.

The Proposed NASA Lunar-Based Astronomical Observatories, Paul N. Swanson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 798-1808.

Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p591-

A Three-Dimensional Tidal Circulation Model Based on Semi-Implicit Finite-Difference Methods, Ralph T. Cheng and Vincenzo Casulli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p428-429.

Winter Operability: Equipment Problems and Their Remedies, Deborah Diemand, CR Sept. 92, p124-137.

Great Britain
Limehouse Link Tunnel Project—London—A Case History, Patrick McCreight, David Scott and George
Tamaro, (Excavation and Support for the Urban Infra-structure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p65-90.

Great Lakes
The 1984 Major Rehab of the Muskegon Harbor, MI
South Breakwater: An Extreme Example of Misguided
Design of a Stone Structure, Charles N. Johnson, (Durability of Stone for Rubble Mound Breakwaters, Orville
T. Magoon, ed. and William F. Baird, ed., 1992),
Consequence.

p238-233.
Construction on Wisconsin's Lake Michigan Coast, J. Philip Keillor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, p762-778.
Environmental Engineering Options for Managing Contaminated Sediment, Norman R. Francingues, Jr. and Daniel E. Averett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p994-999

Field Trip—Cleveland East Breakwater Inspection, Thomas J. Bender, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p270-272. Identifying the Critical Path and Building Coalitions for Restoring Degraded Areas of the Great Lakes, J. H. Hartig, D. P. Dodge, L. Lovett-Doust and K. Fuller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p823-830. Nowcast Protocol for the Great Lakes Forecasting System, Chieh-Cheng J. Yen, Keith W. Bedford and David J. Schwab, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p140-148.

Problems With Armor-Stone Quality on Lakes Michigan, Huron, and Erie, Richard J. Lutton and Ronald L. Erickson, (Durability of Stone for Rubble Mound Break-waters, Orville T. Magoon, ed. and William F. Baird,

waters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p115-136.
We Need to Integrate Water Transportation and Environmental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p403-406.

Green-Ampt model
Simulating the Effects of Deficit Irrigation for Furrow
Systems, J. M. Enciso, D. L. Martin, D. E. Eisenhauer
and N. L. Klocke, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p244-249.

Greens function

Elastic Solutions for Arbitrarily Shaped Foundations, K.
S. Li, GT June 92, p938-942.

Response of Mono-Coupled Distributed Parameter Systems to Random Excitation, D. M. McFarland, L. A.
Bergman and G. G. G. Lueschen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p576-579.

Stochastic Finite & Boundary Element Simulations, Gau-

Stochastic Finite & Boundary Element Simulations, Gau-tam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123.

Grid systems

Boundary-Conforming Coordinate System for Groundwater and Contaminant Transport Modeling, Xiaoxia
Zhao and Victor L. Zitta, Highraulic Engineering Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
10023-1017. 1992), p192-197.

1992, p192-197. Effective Strength of 'Square-and-Diagnonal' Double-Layer Grid, Toshitsugu Saka and Yoshiya Taniguchi, ST Jan. 92, p52-72. Gabions and Geogrids, Alfred H. Brand, CE Sept. 92,

Pullout Tests Using Steel Grid Reinforcements with Low-Quality Backfill, Dennes T. Bergado, Kam-Hung Lo, Jin-Chun Chai, Ramaiah Shivashankar, Marolo C. Alfaro and Loren R. Anderson, GT July 92, p1047-

Review of Equations of Conservation in Curvilinear Co-ordinates, Pei-Fang Wang, EM Nov. 92, p2265-2281.

Splice/Development Length Requirements for FRP Grids Used in the Structural Reinforcement of Concrete, Edwin R. Schmeckpeper and Charles H. Goodspeed, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p632-644.

Strategies for Groundwater Model Application Through GIS, David S. Ward, Robert M. Greenwald and P. Srinivasan, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p32.

Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1139-1149.

Diamond Blades Easet the Road-Repair Grind, CE July

On the Beneficiation and Comminution of Lunar Regolith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138.

Experimental Research on Groyne Stability Under Very Oblique Wave Action, Antonio Baonza and José M. Berenguer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p718-732.

Investigation of Coastal Conditions at Oregon Inlet, NC for the Replacement of the Herbert C. Bonner Bridge, Jeffrey G. Shelden, John R. Lesnik and M. Anthony Young, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p537-553.

Observation of the Post-Construction Performance of a System of Groins along an Eroding Beach, C. I. Moutzouris, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-319.

Recent Criteria for Design of Groins, Cassie C. Klumpp and Drew C. Baird, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p828-

Short Beach Nourishment Fill Performance on an Irregu-lar Coatline, Douglas W. Mann, Lamont W. Curtis and Thomas H. Daniel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119.

Study of Groins on the Middle Rio Grande, Drew C. Baird and Cassie C. Klumpp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p822-827.

## Ground anch

Ground Anchorage Technology—A Forward Look, Stuart Littlejohn, Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p39-62.

Deep Cuts and Ground Movements in Chicago Clay, Richard J. Finno, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143.

Differential Motions in Sedimentary Valleys, Apostolos S. Papageorgiou, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Dynamic Effect of Sediment on Dam Hydrodynamics, Bang-Fuh Chen, Kuo-Chyang Chang and Tin-Kan Hung, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p345-348.

Earthquake Ground Motion Modeling with Stochastic Line Source, Ruichong Zhang and Y. K. Lin, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p256-259.

Exact Nonstationary Response of a Sliding Rigid Struc-ture to a Modulated White Noise Base Excitation, Marc P. Mignolet and Guangwuu W. Fan, (Probabilis-tic Mechanics and Structural and Geotechnical Reliabil-ity, Y. K. Lin, ed., 1992), p408-411.

First-Passage Failure Predictions for Yielding Primary-Secondary Systems, David C. K. Chen and Loren D. Lutes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p564-567.

F-K Spectra From a Haskell-Type Source in a Multiple-Layered Half-Space, George Deodatis, Andronikos Theoharis and Masanobu Shinozuka, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p272-275.

Multiple Modes of Steady-State Slide-Rock Response, Harry W. Shenton, III. and Nicholas P. Jones, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p312-315.

Probabilistic Characteristics of a Sliding Structure Via New Stochastic Linearization Methods, Ruichong Zhang, Isaac Elishakoff and Masanobu Shinozuka, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p196-199.

Response of Suspension and Deck Arch Bridges to Spa-tially Varying Ground Motion, Ronald S. Harichan-dran, Ahmad Hawwari and Basheer N. Sweidan, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p264-267.

Seismic Hazard Analysis for Crude Oil Pipelines in the New Madrid Seismic Zone, Michael J. O'Rourke, (Life-line Earthquake Engineering in the Central and Easiern U.S., Donald B. Ballantyne, ed., 1992), p125-139.

Seismic Response Variability of Soil Sites, C. H. Yeh and M. S. Rahman, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p392-395.

Selection of Ground Motions for the Seismic Evaluation of Embankments, Robert K. Green, (Stability and Performance of Siopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p593-607.

Sensitivity of Lifeline Response to Models for the Spatial Incoherence of the Seismic Ground Motions, Aspasia Zerva, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p560-563.

Site-Dependence of Spatial Coherency, Norman Abrahamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.260-263.

Soil/Structure Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p396-399.

Spatial Variability Effects on the Seismic Response of Models of Bridges, Aspasia Zerva, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p172-175.

Stochastic Modelling of Strong Ground Motions for the Istanbul, Turkey Area from Seismic Data for the Surrounding Region, Kirsten L. Findell and Ahmet Cakmak, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-

Surface Motion Due to Stochastic Plane Sources in a La ered Medium, Y. Yong and J. Yu, (Probabilistic M chanics and Structural and Geotechnical Reliability, K. Lin, ed., 1992), p184-187.

Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

Water, William L. Magette, Adel Shirmohammadi, James D. Wood and Theodore H. Iffi, Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p407-412.

Analytical Solution of Steady Seepage into Double-Walled Cofferdams, Sunirmal Banerjee and Angel Mu-leshkov, EM Mar. 92, p525-539.

Application of Monthly Model of Los Angeles Aqueduct System to Investigate Impacts from Mono Lake Tribu-tary Diversions, Russ T. Brown and William R. Hutchison, (Hydraulic Engineering: Saving a Threat-end Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1042-1048.

Application of Optimal Hydraulic Control to Ground-water Remediation, David Ahlfeld and Manoutic Heidari, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p.1243.

255

Brackish Groundwater Desalting in Southern California:
A Summary of Case Studies, Lee A. Jacobi, Julius Y. Ma and William R. Everest, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p587-592.
Conjunctive Optimization Models, Tom Maddock, III. and William W-G. Yeh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhowmik, ed., 1992), p1242.
Currently Available Expert Systems in Hydrogeienes.

Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-

Despite Study, Questions Surround Yucca Mountain, CE July 92, p14,16.

Drawdown Solutions with Variable Drainable Porosity, Ravi S. Pandey, Ashim K. Bhattacharya, Om P. Singh and Suresh K. Gupta, IR May/June 92, p382-396. Drawdowns for Constant-Discharge One-Dimensional Leaky Aquifer, Louis H. Motz, IR May/June 90, p456-

Drawdowns for Nonleaky Aquifer Flow with Storage in Finite-Width Sink, Louis H. Motz, IR July/Aug. 92,

p645-651.

Engineering Answers to Groundwater Impact Questions Using a Geographic Information System (GIS), Paul E. Albertson and Albert N. Williamson, Utrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p505-510.

Evaluating the Hydrologic Functions of Wetlands, Abiola A. Akanbi and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487.

Evaluation of Collection-Well Parameters for DNAPL, K. Schmidtke, E. McBean and F. Rovers, EE Mar./Apr. 92, p183-195.

92, p183-195.
Expert System for Agricultural and Water Quality Management, William L. Magette and Adel Shirmohammadi, (Irrigation and Drainage: Saving a Threatened Resource—in Search of Solutions, Ted Engman, ed., 1992), p442-447.
Flow-Deformation Response of Dual-Porosity Media, Derek Elsworth and Mao Bai, GT Jan. 92, p107-124.
Geomechanics of Subsidence Due to Pumping of Groundwater, Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1-26.

1992), p1-26.

Ground Water Model Verification and Validation Issues, Task Committee on the Verification and Validation of Ground Water Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1922),

Movement of Nonpoint-Source Contaminants Through Heterogeneous Soils, John C. Tracy, IR Jan./Feb. 92,

Optimization Models for Groundwater Development, Robert Willis and Miquel Mariño, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1244.

Participative Process in Tube Well Irrigation Develop-ment, Manuel Olin, IR Nov./Dec. 92, p882-894.

Henri, Manuel Ulli, 18 NOV/Dec. 92, p882-894. Putonium in Uranium Deposits: Natural Analogues of Geologic Repositories for Plutonium-Bearing Nuclear Wastes, David Curtis, June Fabryka-Martin, Ruber Aguilar, Moses Attrep, Jr. and Fred Roensch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p338-344.

Quasi-Three-Dimensional Optimization Model of Jakar-ta Basin, Brad A. Finney, Samsuhadi and Robert Willis, WR Jan./Feb. 92, p18-31.

Review of Geostatistics in Geohydrology: I. Basic Concepts, ASCE Task Committee on Geostatistical Techniques in Geohydrology of the Ground Water Hydrology Committee of the ASCE Hydraulics Division, HY May 90, p612-632.

Review of Ground-Water Quality Monitoring Network Design, Hugo A. Loaiciga, Randall J. Charbeneau, Lorne G. Everett, Graham E. Fogg, Benjamin F. Hobbs and Shahrokh Rouhani, HY Jan. 92, p11-37.

A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416. Simulated Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p17-182. Sludge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar./ Apr. 92, p196-208. Status of ASCE Handbook of Hydrology, Thomas P. Wootton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p448-451. Taming Environmental Data, Neno Duplancic and Gregory Buckle, CE Aug. 92, p56-58. Vadose Zone Composite Hydraulic Conductivity, ShuTung Chu, IR Sept./Oct. 92, p822-827. Water Quality Implications of Encapsulated Atrazine, Adel Shirmohammadi, Timothy J. Gish and Raviral Vyravipillai, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p424-30.

ed., 1992), p425-430.

Ground-water chemistry
Flow and Transport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, In Che Yang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Forecasting Instabilities in Groundwater Parameters, Fethi Ben-Jemaa and Management. Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p90-95.
The International CHEMVAL Project: Verification and Validation of Geochemical Models, D. Read and T. W. Broyd, (High Level Radioactive Waste Management Program Committee, 1992), p1421-1428.

Modelling the Effect of Atmospheric Emissions on Groundwater Composition, Theresa J. Brown, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Flow Level Radioactive Waste Management Program Committee, 1992), p2518-2322.

Ground-water flow
Alternate Conceptual Model of Ground Water Flow at
Yucca Mountain, Linda L. Lehman, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),

Boundary-Conforming Coordinate System for Ground-water and Contaminant Transport Modeling, Xiaoxia Zhao and Victor L. Zitta, (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p192-197.

1992, p192-197.

Comparative Survey of Four Unsaturated Soil Flow Equations, Abbas A. Fiuzat and David W. Moughton, HY May 92, p786-791.

Computer-Aided Characterization of Wellfield-Testing Results in Basalts, J. A. Paschis, J. R. Kunkel and T. D. Steele, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p475-480.

Conservative Tracers for the C-Well Hydraulic Testing, Tonya Dombrowski, Gary Coates and Klaus J. Stetzenbach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1991-1996.

Design of Landfill Drainage Systems, Bruce M. McEnroe,

Design of Landfill Drainage Systems, Bruce M. McEnroe, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p208-213.

ed., 1992), p208-213.
Development of a Comprehensive Modeling System for Remediation of Contaminated Groundwater, Jeffery P. Holland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1178-1183.
Development of the San Fernando Basin Groundwater Flow Model, Shih-Huang Chieh, Kelli A. Shuter and Melih M. Ozbilgin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p248-233.

Drawdown Solutions with Variable Drainable Porosity, Ravi S. Pandey, Ashim K. Bhattacharya, Om P. Singh and Suresh K. Gupta, IR May/June 92, p382-396.

Evaluation of Dewatering and Treatment System at the Chisman Creek Superfund Site, Precha Yodnane, Denis W. Okorn and Burton M. Marshall, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p250-255.

Flow and Transport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, In Che Yang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p732-737.

Groundwater Management in Southern Florida, Mark M. Wilsnack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ened Resource—In Sed., 1992), p104-109.

Groundwater Modeling of Wastewater Management Op-tions, Dominique N. Brocard and Angelos Protopapas, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p287-292.

Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.

The Hopscotch Algorithm for Three-Dimensional Simulation, Geneviève Ségol, HY Mar. 92, p385-406.

Impact of Fracture Coatings on the Transfer of Water Across Fracture Faces in Unsaturated Media, David P. Gallegos, Steven G. Thoma and Douglas M. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p738-745.

militee, 1976, p. 130-131.
Indicator Variography for Spatial Characterization of Aquifer Heterogeneities, M. V. Cromer and R. M. Srivastava, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p420-425.

Leakage Mechanism Through Double Liner Systems, Abdul R. Mulla Saleh, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p192-200.

New Approaches for Regional Ground-Water Modeling in Southern Nevada, A. Keith Turner and Kenneth E. Kolm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p852-858.

Committee, 1922, ps22-s2, to A Numerical Study of Water Percolation through an Unsaturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, C. F. Tsang, J. Noorishad and F. V. Hale, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p304-309.

Optimization Model for Operation of Recharge Basins, Hasan Mushtaq, Larry W. Mays and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p305-309.

man Karamouz, ed., 1972), p305-307.
Paleohydrologic Implications of the Stable Isotopic Composition of Secondary Calcite Within the Tertiary Volcanic Rocks of Yucca Mountain, Nevada, Joseph F. Whelan and John S. Stuckless, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581.

Statistical Decision Analysis for Interception Wells, Hewa A. Wijedasa and Marian W. Kemblowski, (Irri-gation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p116-121.

Strategies for Groundwater Model Application Through GIS, David S. Ward, Robert M. Greenwald and P. Srinivasan, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p32.

Survey of and I Classicion Criteria for Most Commonly Used Groundwater Models, Lakshmi N. Reddi, C. Harold Emmett, Daniel E. Medina and R. Lee Peyton, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p575-580.

Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, Paul G. Ka-pian, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1643-1646.

Use of Fractal Geometry Concepts in the Simulation of Ground Water Flow and Transport Processes, Angelos N. Findikakis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p33-

36. Water-Rock Interaction in New Zealand Hydrothermal Systems: Comparison of Some Simulated and Observed Geochemical Processes, William E. Glassley and Bruce W. Christenson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p352-356.

Management Program Committee, 1992), p332-336.
Yucca Mountain Project Total-System Performance Assessment Preliminary Analyses: Overview, R. W. Barnard and H. A. Dockery, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p874-881.

d-water m

Adaptive Control of Ground-Water Hydraulics, LaDon Jones, WR Jan./Feb. 92, p1-17.

Jones, WK Jan. Feb. 72, print.
Alternative Methods of Drainage Management in San
Joaquin Valley, California, S. Alireza Taghavi and Ben
Everett, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mobammad Karamouz, ed., 1992), p332-337.

Application of Optimal Hydraulic Control to Ground-water Remediation, David Ahlfeld and Manoutch Heidari, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1243.

Conjunctive Optimization Models, Tom Maddock, III. and William W-G. Yeh, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1242.

Conjunctive Use—Advantages, Constraints, a ples, Jack J. Coe, IR May/June 90, p427-443. and Exam-

pies, Jack J. Coe, IR May/June 90, p427-443.

Decision Analysis Model for Well Rehabilitation and
Groundwater Development, Moses Lake, Washington,
R. H. Anderson, W. J. Roberds and D. Banton, (Water
Resources Planning and Management: Saving a Threatender Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p537-542.

Dual-System Cleanup, Chien D. Ngo, Philip J. Mitchell, John T. Su and Gary M. Carlton, CE Aug. 92, p45-47.

Extended Management Modeling Framework for Optimal Reliability-Based Design with Sampling Decisions, James Uber, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p532-536.

nings, ed. and Nami G. Bhowmis, ed., 1992), p532-336. Feasibility of Water Supply for City of Houston Subsidence Zones Five and Six, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p480-485.

Ground Water Management in Arkansas, Jonathan Ray Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p110-115.

Groundwater Management in Southern Florida, Mark M. Wilsnack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p104-109.

Ground-water Policy-making Support: USEM Optimiza-tion Modeling Plus GIS and Graphics, Richard C. Peralta, Christopher M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza, Douglas Ramsey and Kurt Vest, (Ir-rigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992), p305-310.

Groundwater Recovery Program for Southern California, Andrew Sienkiewich, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p242-247.

Model for Prescribing Ground-Water Use Permits, James W. Male and Frederick A. Mueller, WR Sept./Oct. 92,

Oklahoma's Ground Water Protection Strategy, Michael D. Smolen and Patricia E. Norris, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p98-103.

Optimal Aquifer Management for Controlling Land Subsidence, Theodore G. Cieveland and Lu-Chia Chuang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p872-877.

Optimal Capacity Expansion in Multi-Aquifer Systems, Hasan Yazıcıgil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p432-438.

Solutions, Mohammad Karamouz, ed., 1992), p432-438.

Optimization Models for Groundwater Development, Robert Willis and Miquel Mariño, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1244.

Predicting Effects of Subsidence on Landfill Caps, A. W. Bredariol, J. Larralde, J. P. Martin and C. A. Fiori, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p360-364.

Prediction and Sensitivity of Recharges Due to Rainfall, Sampath K. R. Danda and Lakshmi N. Reddi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402.

Scheduling of Ground Water Pumpage in Alluvial Aquifers to Minimize the Impact on Surface Water Diversions, John C. Tracy and Munipel Al-Sharif, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p798-83.

Systems Analysis in Ground-Water Planning and Management, William W. -G. Yeh, WR May/June 92, p224-237.

Technology—Key to Environmental Success, Paul Soros,

p224-231. Technology—Key to Environmental Success, Paul Soros, (Ports '92, David Torseth, ed., 1992), p189-202. Use of D-C Resistivity to Map Saline Ground Water, Christina L. Stamos, Steven K. Predmore and Adel A. R. Zohdy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ened Resource-I ed., 1992), p80-85

ed., 1992), p80-83.
Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.

Ground-water mounding
Potential Flow Solution for Ground Water Mounding,
Tswn-Syau Tsay, John Hoopes, Craig Fergusson and
Salwa Rashad, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p790.

Ground-water pollution
Analytical Prediction of Gasoline Thickness on the Water
Table, M. Yavuz Corapcioglu, Rajasekhar Lingam and
Vern K. Haisler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Schittons, Mohammad Karamouz, ed., 1992), p254-259.

259.
Application of Neural Network to Groundwater Remediation, J. H. Garrett, Jr., S. Ranjithan and J. W. Eheart, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p.359-267.
Boundary-Conforming Coordinate System for Groundwater and Contaminant Transport Modeling, Xiaoxia Zhao and Victor L. Zitta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.192-197.
Characterizing the Altered Zone at Vince Mountain.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

Level Radioactive Waste Management Program Com-mittee, 1992), p1026-1039.

Cleaning Up Chromium, W. Scott McKinley, Randy C. Pratt and Loren C. McPhillips, CE Mar. 92, p69-71.

Comparison of Numerical Modeling Approaches for Sub-surface Immiscible Contaminant Transport, Klaus Rathfelder and Linda M. Abriola, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p275-280.

Computer Codes for Modeling Multi-Phase Flow and Transport in the Subsurface, Paul K. M. van der Heijde, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p31.

Connecticut's Wellhead Protection Program, Fred S. Banach, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p92-97.

Contaminant Groundwater Interception—RMA, S. Paul Miller and William L. Murphy, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1171-1176.

ed., 1992, pl11-1176.
Decision Analysis Model for Well Rehabilitation and Groundwater Development, Moses Lake, Washington, R. H. Anderson, W. J. Roberds and D. Banton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p537-542.

Karamouz, ed., 1992), p537-542.

Degradation of Ground Water by Tetrachloroethylene, Wendy L. Cohen and Victor J. Izzo, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p63-68.

The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, Pankaj A. Arora and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p451-456.

1992), p451-456.

Development of a Comprehensive Modeling System for Remediation of Contaminated Groundwater, Jeffery P. Holland, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1178-1183.

Dual-System Cleanup, Chien D. Ngo, Philip J. Mitchell, John T. Su and Gary M. Carlton, CE Aug. 92, p45-47.

Excavations and Contamination, Bryan P. Sweeney and Joel S. Mooney, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p26-45.

Extended Management Modeling Framework for Optimal

Extended Management Modeling Framework for Optimal Reliability-Based Design with Sampling Decisions, James Uber, (Hydraulic Engineering: Saving a Trea-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p532-536.

mmgs, cu. and Ivani U. BROWMIK, ed., 1992], p532-536. Fingerprint Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluorescence, Daniel York Phart, (Water Resourcer Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p579-584.

From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314.

Groundwater Recovery Program for Southern California, Andrew Sienkiewich, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Soutions, Mohammad Karamoux, ed., 1992), p242-247.

Grouting Against Hazwaste, Ken Weaver, R. M. Coad and K. R. McIntosh, CE May 92, p70-72.

Wall, Chikashi Sato, Derek A. Braithwaite, Angelos Protopapas and Paul P. Stewart, Grouting, Soil Improvement and Geosprithetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1298-

Implementing a Wellhead TCE Removal Project in Red-lands, Richard Corneille and Michael Huffstutler, (En-vironmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p315-320.

Integrated Remediation of Soil and Groundwater, Russell S. Dykes and Arlin C. Howles, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p244-249.

Sommons, F. Pierce Linaweaver, ed., 1992), p244-249.

Migration of Chloroform in Aquifers, Sergio E. Serrano,
EE Mar/Apr. 92, p167-182.

Modelling the Effect of Atmospheric Emissions on
Groundwater Composition, Theresa J. Brown, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p2318-2322.

Movement of Nonpoint-Source Contaminants Through Heterogeneous Soils, John C. Tracy, IR Jan/Feb. 92, p88-103.

Oklahoma's Ground Water Protection Strategy, Michael D. Smolen and Patricia E. Norris, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p98-103.

Plume Movement and Mixing in Heterogeneous Aquifer, Salwa Rashad, John Hoopes, Craig Fergusson and Tswn-Syau Tsay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p180-185.

185.
Predicting Effects of Subsidence on Landfill Caps, A. W. Bredariol, J. Larralde, J. P. Martin and C. A. Fiori, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), 3960-364.
A Preliminary Evaluation of Transport Mechanisms for Multiple Substrates in a Laboratory Column System, Zhihuai Xue and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p180-183.
Principles of Ground-Water Partering Devices and Columna Principles of Ground-Water Partering Devices.

p180-185.

Principles of Ground-Water Protection, David W. Miller, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p86-91.

Process Design for Bioremediation of Nitrogen-Species Contamination of Soils and Groundwater, Paul D. Turpin, J. Michael Henson and Steven L. Martin, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.

Rapid Detection of Hydrocarbon Contamination in

wirommenial Engineering: Saving a Intreatenea Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.

Rapid Detection of Hydrocarbon Contamination in Ground Water and Soil. A. M. Chrestman, G. D. Comes, S. S. Cooper and P. G. Malone, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1165-1170.

Recovery of Metals from Water Using Ion Exchange, Thomas A. Hickey and David K. Stevens, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515.

Reduced Recharge Capacity of a Pump and Treat System, Cynthia L. Teeter, Douglas Gunnison, Norman R. Francingues, Jr. and Mark E. Zappi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1197-1203.

Removal of Extremely Low Levels of Munitions in a Drinking Water Supply, R. Mark Bricka and Wayne Sharp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1190-1196.

Removal of Extremely Low Levels of Munitions in a Drinking Water Supply, R. Mark Bricka and Wayne Sharp, (Hydraulic Engineering: Saving and Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p116-121.

Simulation of Two Approaches to Curb Potential Buildup of Nitrates in Groundwater, D. Adeiman, S. Zbeng and M. F. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p288-300.

Statistical Decision Analysis for Interception Wells,

p. 26-300. Statistical Decision Analysis for Interception Wells, Hewa A. Wijedasa and Marian W. Kemblowski, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p116-

A Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinipour and Vincent M. Gorokhovski, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p. 186-191.

Theory and Experiments on Subsurface Contaminant Sorption Systems, Kirk Hatfield, David Burris, Thom-as B. Stauffer and Joe Ziegler, EE May/June 92, p322-

Treatability Study of Granular and Biological Activated Carbon for Groundwater Containing Fenac, a Herbicide, Chen-yu Yen and Rong-Jin Leu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p104-109.

Treatment of Contaminated Groundwater Using Chemi-cal Oxidation, Mark E. Zappi, Beth C. Fleming and M. John Cullinane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Ran-dall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p281-

Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, Dennis L. Corwin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p152-157.

Statistics of Groundwater Contaminant Parameters, Gregory D. Comes, James Warner and S. Paul Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1177.

VOC-Contaminated Water Cleanup Incentive Program, Dan L. Glasgow and Richard A. Rhone, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p214-219.

Ground-water quality

Aldicarb Transport in the Coastal Plain of N. C. C. L. Munster, R. W. Skaggs, J. E. Parsons, R. O. Evans, J. W. Gilliam and E. W. Harmsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424.

Analysis of Soil-Air Permeability and Saturated Hydrau-lic Conductivity for Remedial System Design, Hamid G. Bojd and B. V. Naajundeswar, (Environmental En-gineering: Sating a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p321-326.

ssessing the Leaching Potential of Herbicides at the Ohio MSEA, S. R. Workman, A. D. Ward and W. G. Knisel, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p413-418.

Case Study: Design of Groundwater Quality Monitoring Systems, Leonard Cilli and Richard Bizub, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p75-79.

Connecticut's Wellhead Protection Program, Fred S. Banach, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., Resource—In 1992), p92-97.

Design of Irrigation Distribution System, Steve Robertson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p462-467.

Dual-System Cleanup, Chien D. Ngo, Philip J. Mitchell, John T. Su and Gary M. Carlton, CE Aug. 92, p45-47.

Forecasting Instabilities in Groundwater Parameters, Fethi Ben-Jemaa and Miguel A. Mariño, (Water Re-sources Planning and Management: Saving a Threat-end Resource—In Search of Solutions, Mohammad ened Resource-In Search of Karamouz, ed., 1992), p90-95

Ground Water Management in Arkansas, Jonathan Ray Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p110-115.

Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.

Grouting Against Hazwaste, Ken Weaver, R. M. Coad and K. R. McIntosh, CE May 92, p70-72.

Hydraulic Conductivity of Landfill Liners Containing Benzyltriethylammonium-Bentonite, James A. Smith, Pamela M. Franklin and Peter R. Jaffé, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p186-

Hydrologic Considerations in Mined Land Reclamation, Patrick T. Tyrrell and Martin W. Stearns, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p383-388.

Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p171-176.

man, eu., 1992), p171-176.
Loading of Nutrients to Ground-vater From High Source
Areas During the Winter Period, Paul D. Robillard and
Michael F. Walter, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p373-578.

Nitrate Risk Management under Uncertainty, Yong W. Lee, Mohamed F. Dahab and Istvan Bogardi, WR Mar./Apr. 92, p151-165.

Mar./Apr. 92, p151-165.
Oklahoma's Ground Water Protection Strategy, Michael D. Smolen and Patricia E. Norris, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p98-103.
Perceptions, Sensitivity, and Solutions; Water Quality 2000, John B. Pearce, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), n30-43. p39-43.

Principles of Ground-Water Protection, David W. Miller, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p86-91.

1992), p80-91.
Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p98-103.

tions, F. Pierce Linaweaver, ed., 1992), p98-103.

Review of Ground-Water Quality Monitoring Network Design, Hugo A. Loaciga, Randall J. Charbeneau, Lorne G. Everett, Graham E. Fogg, Benjamin F. Hobbs and Shahrokh Rouhani, HY Jan. 92, p11-37.

Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, Dennis L. Corwin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p152-157.

Using GIS To Locate Salinity on Irrigated Soils, Dennis L. Corwin, Mark Sorensen and James D. Rhoades, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p468-475.

Winter Nutrient Losses to Groundwater Associated with

Winter Nutrient Losses to Groundwater Associated with Various Tillage Manure Systems, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p567-512.

ground-water recharge

3H and <sup>14</sup>C as Tracers of Ground-Water Recharge, John
A. Izbicki, Robert L. Michel and Peter Martin, (Irrigation and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p122-127.
Applying the ARMOS and MOFAT Models to a Major
Oil Spill, Otto J. Helweg, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
-535.500

p585-590.

p385-590. Artificial Recharge Feasibility Evaluation by Field Investigation, Maury E. Ford, Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Scott Keys, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647. Geomechanics of Subsidence Due to Pumping of Groundwater, Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1.25

1992), p1-26.

1992), p1-26.
Groundwater Recharge as a Reclaimed Water Transport Mechanism, Thomas G. Richardson and Nereus L. Richardson, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p61-66.
Potential Flow Solution for Ground Water Mounding, Tswn-Syau Tsay, John Hoopes, Craig Fergusson and Salwa Rashad, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p790.
Prediction and Sensitivity of Recharges Due to Rasinfall

Prediction and Sensitivity of Recharges Due to Rainfall, Sampath K. R. Danda and Lakshmi N. Reddi, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402.

Reduced Recharge Capacity of a Pump and Treat System, Cynthia L. Teeter, Douglas Gunnison, Norman R. Francingues, Jr. and Mark E. Zappi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 197-1203.

Rubber Dam Holds Water, CE Feb. 92, p88.

Water Reuse to Gain Water Rights for Hays, Kansas, H. Wayne Gresh and Jeffrey W. Henson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p55-60.

Ground-water supply
Forecasting Instabilities in Groundwater Parameters, Fethi Ben-Jemaa and Miguel A. Mariño, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p90-95.

Karamouz, ed., 1992), p90-95.
Study of Groundwater Availability in Case of Drought, Tiao J. Chang and Choo B. Teoh, (Water Resource: Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p130-137.
Tapping Shallow Groundwater with Horizontal Wells, Brian J. Boman and Donald R. Justice, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p45-50.
VOC-Contaminated Water Cleanup Incentive Program, Dan L. Glasgow and Richard A. Rhone, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p214-219.

earing Capacity of Auger-cast Piles in Sand, William J. Neely, GT Feb. 91, p331-345.

Behavior of Partially Grout-Filled Damaged Tubular Members, S. Parsanejad and P. Gusheh, ST Nov. 92, p3055-3066.

Bonding Strength of Grouts and Behavior of Silicate Grouted Sand, C. Vipulanandan and A. Ata, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p700-711.

Compaction Grout: Rheology vs. Effectiveness, James Warner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p229-239.

Computer Simulated Flow of Grouts in Jointed Rock, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p461-473.

Concrete for Sealing Voids in Rubble Structures, D. P. Simpson, B. D. Neeley and D. M. Walley, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p847-861.

Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

Contaminant-Grout Interaction, Stephan A. Jefferis, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1393-1402.

Creep Recovery of Prepacked Aggregate Concrete, Abu S. M. Abdul Awal, MT Aug. 92, p326-325.

Lightweight Grout Eases Sewer Rehab, CE Feb. 92, p14,16.

Permanent Excavation Support and Underpinning in Sands: A Case History, Russell J. Morgan, Lawrence F. Johnsen and Franklin M. Grynkewicz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p778-

Recent Advances in Compaction Grouting Technology, James Warner, Norbert Schmidt, John Reed, Don Shepardson, Russ Lamb and Sam Wong, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), ed., Rober p252-264.

Recent European Developments in Constructing Grouted Slabs, Norbert Tausch, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p301-312.

Ambient Temperature Effect in Concrete Dam Founda-tion Seepage, E. C. Kalkani, GT Jan. 92, p1-11.

Grouting for Hazardous Waste Site Remediation at Necco Park, Niagara Falls, New York, K. D. Weaver, R. M. Coad and K. R. McIntosh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1332-1343. Hybrid Grouting Techdaniques to Stabilize a Weakly Cemented Sandstone at King Talai Dam, Jordan, B. Anthony, M. P. Bruen, R. R. Mann and Z. Alem, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.

Grouting
Chemical Based Cement Grout System for Rock Grouting, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p651-

Classification of Jointed Rock with Emphasis on Grout-ing, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), 944-460.

Computer Simulated Flow of Grouts in Jointed Rock, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., Contamient

Contaminant-Grout Interaction, Stephan A. Jefferis, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 393-1402.

1774b, p139-1406.
Development of a Gas-Liquid Reaction Injection System, Shunsuke Shimada, Masanori Ide and Hiromu Iwasa, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p325-336.

1992), p3.23-330.
Earthquake Support Grouting in Sands, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888.
Effect of Particle Contact Bond on Shear Modulus, Tzyy-Shiou Chang and Richard D. Woods, GT Aug. 92, p1216-1233.

The Effects of Fillers and Admixtures on Grout Performance, Sandra Z. Tosca and Jeffrey C. Evans, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992). p337-349.

p337-349.
Exploration/Grouting in Cambro-Ordovician Karst, Joseph A. Fischer, Richard W. Greene, Joseph J. Fischer and Frank W. Gregory, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p350-359.
Flexural Tensile Strength of Partially Grouted Concrete Masonry, Ahmad A. Hamid, Omar A. Elnawawy and Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393.
Faceture Grouting with Bentonite Surgies, C. Ran and J.

Fracture Grouting with Bentonite Surries, C. Ran and J. J. K. Daemen, (Grouting Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p360-371.

ed. and Han Juran, ed., 1992), p360-371. Fundamental Observations on Cement Based Grouts (2): Microfine Cements and The Cemili® Process, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holitz, ed. and Ilan Juran, ed., 1992), p486-499.

A Geologist's Perspective on Dam Foundation Grouting, Kenneth D. Weaver, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p639-650.

Grouting Against Hazwaste, Ken Weaver, R. M. Coad and K. R. McIntosh, CE May 92, p70-72.

and K. R. McIntosh, CE May 92, p70-72.
Grouting for Hazardous Waste Site Remediation at Necco Park, Ningara Falls, New York, K. D. Weaver, R. M. Coad and K. R. McIntosh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1332-1343.
Grouting Improvement of Foundation Soils, Francesco Gallavresi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1-38.

Grouting, Soil Improvement and Geosynthetics, Geo-technical Special Publication No. 30, 2 vols, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, 0-87262-865-5, 1480pp.

Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-261.

Hybrid Grouting Techdniques to Stabilize a Weakly Cemented Sandstone at King Talal Dam, Jordan, B. A. Anthony, M. P. Bruen, R. R. Mann and Z. Alem, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.

Jet Grouting in Contaminated Soils. Herff N. Gazzarov.

1992), p577-587.
Jet Grouting in Contaminated Soils, Herff N. Gazaway and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holiz, ed. and Ilan Juran, ed., 1992), p206-214.
Permanence of Grouted Sands Exposed to Various Water Chemistries, John M. Siwula and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1403-1419.
Pre-Compression of Concrete Repasting Delphing Solves

1992), p1403-1419.

Pre-Compression of Concrete Breasting Dolphins Solves Construction Problem, Robert A. Blowers, Alexander Matlin and Antoni J. Zelechowski, (Forts '92, David Torseth, ed., 1992), p602-615.

Preferred Orientation of Pore Structure in Cement-Grouted Sand, Maan Helal and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p526-540.

Properties of Cement Grouts and Grouted Sends with

1992, p326-340.
Properties of Cement Grouts and Grouted Sands with Additives, C. Vipulanandan and S. Shenoy, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1952). p500-511.

ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1952), p500-511.

Recent Progress in American Pinpile Technology, Donald A. Bruce, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p765-777.

Settlement Reduction by Soil Fracture Grouting, Mario J. Pototschnik, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p398-409.

Settlement, Structural Failure, and In-place Repair of Above Ground Storage Tanks, Richard M. Berry and Robert P. Buhrow, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p400-251.

Some Factors Related to Injected Shape in Grouting. Akira Mori, Masashito Tamura, Hideaki Shibata and Hideo Hayashi. (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p313-324.

Time-Viscosity Relationships of Newtonian and Binghamian Grouts, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed., and Ilan Juran, ed., 1992), p663-675.

Ultrafine Cement Tests and Dam Test Grouting, William J. Clarke, Millard D. Boyd and Maan Helal, (Grouting, ed., Robert O. Holtz, ed., Robert O. Holtz,

Grouting equipment
Compaction Grout, 1992, Edward D. Graf, (Grouting,
Soil Improvement and Geosynthetics, Roy H. Borden,
ed. Robert O. Holtz, ed. and Ilan Juran, ed., 1992),
p275-287.

Tunnel Grouting Record Pumped Up in Los Angeles, CE Feb. 92, p88.

AASHTO Seismic Isolation Design Requirements for Highway Bridges, Ronald L. Mayes, Ian G. Buckle, Trevor E. Kelly and Lindsay R. Jones, ST Jan. 92, p.284-304.

p284-304. Are Existing Traffic Methodologies Realistic? Nelson B. Nuckles, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p211-216.
Arizona's Uniform Traffic Impact Procedures, Peter M. Lima and Eric Kalivoda, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p94-98.

Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1037-1054.

Construction and Development of a Human Base on Mars, Owen Gwynne, Yoji Ishikawa, Yukinobu Yamamoto, Hisateru Uyeda and Thomas Bongiovi, (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p89-99.

Design Guidelines for a Sedimentation Control System at Open Channel Diversions, Vincent S. Neary and A. Jacob Odgaard, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p198-203.

203. Draft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Com-mittee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Tor-seth, ed., 1992), p939-1000.

seth, ed., 1992), p939-1000.

Draft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwaters, ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Ennio DeCurtis, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Douglas Sethness, Jr.), (Ports '92, David Torseth, ed., 1992), p1001-1069.

Draft Chapter 3—Planning and Design Guidelines for

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE Ports and Harbors Task Committee (Paper Prepared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster), (Ports '92, David Torseth, ed., 1992), p1070-1151.

1992), p1070-1151.

Dynamic Compaction Engineering Considerations, Robert G. Lukas, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p940-953.

EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1656-1667.

Experience with Beach Fill Equilibration and Recommended Design Guidelines, Erik J. Olsen, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p45-59.

gineering Practice '92', Steven A. Hughes, ed., 1992), p45-59.

A Guideline for Determining Minimum Threshold Requiring Traffic Impact Studies, Anthony A. Saka, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6-10.

Guidelines for Desire of Cohle Strand Bidders, ASCE Guidelines for Desire of Cohle Strand Bidders, ASCE

Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6-10. Guidelines for Design of Cable-Stayed Bridges, (Man-Chung Tang, chmn.), 1992, 0-87262-900-7, 70pp. Institutional Constraints to the Use of Coal Fly Ash in Civil Engineering Construction, Timothy N. Kyper, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p32-43. Labeling of the Spent Fuel Waste Package, W. G. Culbreth and A. K. Chagari, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p395-400. Major Public Transportation Investments as "Development Projects": Old Colony Railroad, Mary P. McShane, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p138-142. Operation of the Tennessee Valley Authority Water Control System Under Extreme Drought Conditions, H. Morgan Goranflo, Jr., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-365.
Planning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik), (Ports '92, David Toresth, ed., 1992), p937-938.

Planning and Design Guidelines for Small Craft Har-bors—Economics and Finance, ASCE Ports and Har-bors Task Committee (Paper Prepared by Lawrence E. Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports 92, David Torseth, ed., 1992), p1152-1183. Planning Your Negotiation, Michael Lee Smith, ME July 92, p254-260.

Removing Incentives for Conflict, R. Wane Schneiter, CE Mar. 92, p6.

Review of API Guidelines for Pipe Piles in Sand, Magued Iskander and R. E. Olson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p798-812. Standardizing Seismic Rehab, CE Sept. 92, p11. Sturvey of and Classification Criteria for Most Commonly Used Groundwater Models, Lakshmi N. Reddi, C. Harold Emmett, Daniel E. Medina and R. Lee Peyton, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p575-580. Traffic Impact Analysis Standardization—The Orange County, California Experience, Steve Hogan, Jerry Ingram and Kari Rigoni, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Roughail, ed. and T. C. Sutaria, ed., 1992), p97-103. Uniform Traffic Impact Assessment Studies—A Case History of Riverside County, California, Lawrence A. Toerper, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p114-117.
The U.S. Naval Facilities Offshore Platform Inspection, Maintenance, Repair and Rehabilitation Program, T. Regin and T. O'Boyle, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p531-545. Wetland Restoration and Creation Guidelines for Mitigation, Mary C. Landin, E. A. Dardeau, Jr. and Jerry L. Miller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p431-444.

Gulf of Mexico

Hurricane Camille Shelf Wave Simulation Using a Numerical Ocean Circulation Model, Le Ngoc Ly and Lakshmi Kantha, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p586-593.

ed., 1992), p586-593.

The Physiography and Engineering Constraints of the Continental Slope in the Northwestern Gulf of Mexico, William R. Bryant and Gregory R. Simmons, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1036-1050.

Tide and Storm Surge Predictions Using Finite Element Model, J. J. Westerink, R. A. Luettich, A. M. Baptista, N. W. Scheffner and P. Farrar, HY Oct. 92, p1373-1300.

1390.

1390.

Use of Manned Submersibles to Investigate Slumps in Deep Water Gulf of Mexico, Earl H. Doyle, Michael J. Kaluza and Harry H. Roberts, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p770-782.

Use of X-Ray Computed Tomography in the Study of Marine Sediments, Thomas H. Orsi, Aubrey L. Anderson, John N. Leonard, William R. Bryant and Carl M. Edwards, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p968-982.

Microcomputer Analysis of Guyed Towers as Lattices, Raja R. A. Issa and R. Richard Avent, ST Apr. 91, p1238-1256.

Predicting Tower Guy Pretension Using a Neural Net-work, Raja R. A. Issa, Desmond Fletcher and Ruth Ann Cade, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1074-

Gypsum
FGD Waste Engineering Properties are Controlled by
Disposal Choice, Charles L. Smith, (Utilization of
Waste Materials in Civil Engineering Construction,
Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed.,
1992), p44-59.

1992), p44-59.
Properties of Gypsum Wallboards Containing Fly Ash, Ramesh C. Joshi, Joonu O. Thomas and Rex B. Adam, MT May 92, p212-225.
The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inayang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.

Improved Design Procedures for Vertically Loaded H-Piles in Sand, Harry M. Coyle and Ronald Ungaro, GT Mar. 91, p507-528.

Half space Cone Models for Homogeneous Soil. I, Jethro W. Meek and John P. Wolf, GT May 92, p667-685.

Evaluation of In Situ Effective Shear Modulus from Dis-persion Measurements, Christos Vrettos and Bernd Prange, GT Oct. 90, p1581-1585.

F-K Spectra From a Haskell-Type Source in a Multiple-Layered Half-Space, George Deodatis, Andronikos Theoharis and Massanobu Shinozuka, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p272-275.

Stresses Induced by Surficial and Deep Loading in Elastic Medium, Olivier Rossa and Gabriel Auvinet, GT Aug. 92, p1241-1246.

Wave Propagation in a Randomly Layered Medium, Werner Kohler, George Papanicolaou and Benjamin White, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p381-383.

Disabilities Act Leads to Confusion, CE May 92, p8. So How Do We Build Now?, CE Feb. 92, p12.

The OCEA Awards of Merit, Teresa Austin, CE July 92, p50-53.

Steel Alloy Aids Pennsylvania Bridge, CE Dec. 92, p88.

## Harbor engineering

Broadside Current Forces on Moored Ships, William N. Seelig, David Kriebel and John Headland, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., neering in the (1992), p326-340.

Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, 0-87262-866-3, 1100pp.

Mobile-Bed Physical Model Tests for the 1992 Olympic Harbour, L. Moreno, C. Tamayo and J. Losada, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p840-849.

## Harbor facilities

Experimental Studies for the Port of Bilbao Extension, José R. Iribarren and María J. Martín, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p149-157.

Hong Kong Port Facilities, Airport, and Housing Require New Concepts, C. K. Chow, El Oct. 92, p403-414.

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE Ports and Harbors Task Committee (Paper Prepared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster), (Ports '92, David Torseth, ed., Charles G. Forster 1992), p1070-1151.

Mobile-Bed Physical Model Tests for the 1992 Olympic Harbour, L. Moreno, C. Tamayo and J. Losada, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p840-849.

Alameda Transportation Corridor, Arthur B. Goodwin, (Ports '92, David Torseth, ed., 1992), p94-107.

Barbers Point Harbor: A Unique Solution for Port Up-grade, Michael J. Briggs and Eivind Bratteland, (Ports 92, David Torseth, ed., 1992), p777-790.

Clean-Up of Contaminated Soils: A Necessary First Step in Industrial Land Redevelopment, Dennis D. Lang, (Ports '92, David Torseth, ed., 1992), p301-315.

Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, 0-87262-866-3, 1100pp.

Comparison of Model and Field Results for Barbers Point Harbor, Michael J. Briggs, Linda S. Lillycrop and David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p387-399.

Conflict of Interest in Deep-Draft Anchorage Usa Application of QT, Jan A. Berg-Andreassen and A K. Prokopowicz, WW Jan./Feb. 92, p75-86.

Diversion Oil Booms in Current, M. Robinson Swift, Bar-baros Celikkol, Gilles LeCompagnon and Chris E. Goodwin, WW Nov./Dec. 92, p587-598.

Draft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Torseth, ed., 1992), p339-1000.

Draft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwaters, ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Ennio DeCurtis, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Dougias Sethness, I., (Ports '92, David Torseth, ed., 1992), p1001-1068.

Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992),

p548-562

262

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, James D. Bowen, Steven H. Wolf and Curtis A. Meininger, (Ports '92, David Torseth, ed., 1992), p443-455.

A Dual Approach to Low Frequency Energy Definition in a Small Craft Harbor, Chuck Mesa, (Coastal Engineer-ing Practice '92, Steven A. Hughes, ed., 1992), p400-

Effect of Jetty Configuration on Wave Conditions and Dredge Quantities at Green Harbor, MA, Cheryl E. Burke, Joan Pope and Mary A. Cialone, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992),

Environmental Constraints Associated with Dredging in Southern California, Anthony J. Risko and Moham-med N. Chang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p975-988.

Environmental Monitoring and Operator Guidance Sys-tem (EMOGS) for Shallow Water Ports, Andrew L. Sil-ver, (Ports '92, David Torseth, ed., 1992), p535-547.

Evaluation of Proposed Port Facilities, Charleston Har-bor, South Carolina, Samuel B. Heltzel, (Ports '92, David Torseth, ed., 1992), p791-801.

Harbour Development in Southern Part of Thailand, Su-tat Weesakul, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369.

Historic Seawalls of the Boston Harbor, Massachusetts Region: Evolution, Construction and Repair, David B. Vine and Peter S. Rosen, (*Ports '92*, David Torseth, ed., 1992), p849-867.

Honolulu Harbor Ship Traffic Simulation and Animation Study, James R. Walker, Vedat Demirel and Michael C. Leue, (*Ports '92*, David Torseth, ed., 1992), p868-

Inner Harbor Wave Conditions due to Breakwater Over-topping, Fredric Raichlen, Jack C. Cox and Jerald D. Ramsden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p425-446.

Laupahoehoe Harbor Planning, Design, & Construction David A. Lau, (Coastal Engineering Practice '92 Steven A. Hughes, ed., 1992), p320-336.

Longshore Sediment Transport Rate at Morro Bay, CA, James M. Kaihatu, Chris Andrassy and Edward F. Thompson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p615-631.

Los Angeles-Long Beach Harbors Model Enhancement Program, William C. Seabergh, S. Rao Vemulakonda and James Rosati, III., (Ports '92, David Torseth, ed., 1992), p884-897.

Military Techniques for Expedient Repair of Earthquake Damaged Harbor Infrastructure, Lyndell Z. Hales and Ivan L. Sheall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p370-386.

Mitigation of Harbor Caused Shore Erosion with Beach Nourishment Delayed Mitigation, St. Joseph Harbor, MI, Charles N. Johnson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p137-153.

Model Tests for Expansion of Anaheim Bay Naval Har-bor, Robert R. Bottin, Jr. and Dan Muslin, (Ports '92, David Torseth, ed., 1992), p768-776.

Numerical Modeling of Proposed Kawaihae Harbor, HI, Linda S. Lillycrop and Stanley J. Boc, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992), neering Practice p412-424.

Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1055-1068.

Planning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Pre-pared by Fred A. Klancnik), (Ports '92, David Torseth, ed., 1992), p937-938.

Planning and Design Guidelines for Small Craft Har-bors—Economics and Finance, ASCE Ports and Har-bors Task Committee (Paper Prepared by Lawrence E. Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports '92, David Torseth, ed., 1992), p1152-1183. Reformulation Efforts for Panama City Harbor, Florida, Cheryl Phanstiel Ulrich, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352. Remote Automated Wave and Water Level Monitoring System Deployed at Agai Harbor, Guam, David D. McGehce, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p898-907.

Rugies, ed., 1922, ps. 1924, Role of the Coastal Engineer in Civil Engineering Practice, ASCE Coastal Engineering Technical Committee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p918-934.

ed., 1992), 991-934.
Santa Barbara Harbor Assessment of Shoaling Frequency,
Russell H. Boudreau, Alan Alcorn and Stephen Fine,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p447-461.
Scheduling Maintenance Dredging on Single Reach with
Uncertainty, Jay R. Lund, WW Mar/Apr. 90, p211-

Securing Strategic National Security Objectives Through Maritime Activities, S. G. Phernambucq and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-

Tide- and Wind-Driven Flushing of Boston Harbor, Mas-sachusetts, Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p594-606.

Swanson, ed., 1992), p394-006.
Verification Techniques Used in Modeling Charleston Harbor, South Carolina, Samuel B. Heltzel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p257-262.
Water-Level Oscillations in Esperance Harbour, Michael L. Morison and Jörg Imberger, WW July/Aug. 92, 2353-267.

p352-367.

Wave Barriers: An Environmentally Benign Alternative, Jeffrey F. Gilman and Dennis Nottingham, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p479-486.

## Hardness

Anisotropic Hardening Plasticity Model for Sands, Robert Y. Liang and Hann-Ling Shaw, GT June 91, p913-933.

polision A Hard Rock Approach to Rubble Mounds, Robert B. Wendorf, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), pl 51-159.

Laupahoehoe Harbor Planning, Design, & Construction, David A. Lau, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.320-336. Numerical Modeling of Proposed Kawaihae Harbor, HI, Linda S. Lillycrop and Stanley J. Boc, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.412-424.

Recycling Wastewater by Drip Irrigation, Win Bui, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p437-

Hazardous materials
Asbestos Melting, Reuse Could Ease Landfill Demand,
CE Jan. 92, p18.

Asbestos Mething, Reuse Could Ease Landini Demand, CE Jan. 92, p.18.

Effects of Viscosity on Migration of Spills of Hazardous Liquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.784-789.

GIS Analysis of Routes for Transportation of Hazardous Materials, Baxter E. Vieux and Madhusudan V. Kalyanapuram, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.168-173. Identifying Promising Hazardous Waste Reduction Technologies, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.139-144.

Military Toxics in Hot Water, CE Sept. 92, p.30.

Probabilistic Environmental Risk of Hazardous Materials, Timothy L. Jacobs and P. Aarne Vesilind, EE Nov./Dec. 92, p.878-889.

Regulations Spur Automated Hazmat Management, CE Feb. 92, p18-19.

Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Solvent Substitutes, Benerito S. Martinez, Jr., Ricardo B. Jacquez and Walter H. Zachritz, Il., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p169-174.

Educational Program for Hazardous-Waste Management, Carol J. Miller, Ralph H. Kummler, James H. McMick-ing and Robert W. Powitz, El Apr. 90, p221-228.

Effect of Collector Dosage on Metal Removal by Precipitation/Flotation, Venbakm C. Gopalratnam, Gary F. Bennett and Robert W. Peters, EE Nov./Dec. 92, p923-948.

p923-948.

Electrokinetic Soil Processing (A Review of the State of the Art), Yalcin B. Acar, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1420-1432.

Grouting Against Haxwaste, Ken Weaver, R. M. Coad and K. R. McIntosh, CE May 92, p70-72.

Guidance for Decontamination of Debris, Mackenzie L. Davis, Gene P. Chou, William G. Sproat, Jr. and Peter J. Shields, (Environmental Engineering: Saving a

Davis, Gene P. Chou, William G. Sproat, Jr. and Peter J. Shields, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p49-54.
Hazardous Waste Containment with a Bentonite Cutoff Wall, Chikashi Sato, Derek A. Braithwaite, Angelos Protopapas and Paul P. Stewart, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1298-1310.

Hazwaste May Leave Like a Jet Plane, CE Oct. 92, p14.
Hydraulic Conductivity of Landfill Liners Containing
Benzyltriethylammonium-Bentonite, James A. Smith,
Pamela M. Franklin and Peter R. Jaffé, (Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p186-

191. Identifying Promising Hazardous Waste Reduction Technologies, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl 39-144. Incineration—Panacea or Pandemic? Harvey W. Rogers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl 57-162.
Inducer Compounds in the Enricher-Rescot Process.

ed., 1992), p157-162.
Inducer Compounds in the Enricher-Reactor Process, Roger W. Babcock, Jr., Chwen-Jeng Tzeng, Simlin Lau and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p468-47.
Kettleman Hills Waste Landfill Slope Failure. I: Liner-System Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668.

eave the Short Form at Home, CE Apr. 92, p10.

Leave the short form at Home, U.E. Apr. 92, p.10. Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, J. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p.236-259.

Permeation of Organic Chemicals Through HDPE Geomembranes, Joni P. Sakti, Jae K. Park and John A. Hoopes, [Environmental Engineering: Saving a Threat-end Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1929, p201-207.

Pilot Test Vaporizes Hazwaste, CE Nov. 92, p10.
Project Tests Safer Burning of Medical Waste, CE Jan.
92, p19,21.

92, p19,21.
Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p98-103.
Remediation Site Prioritization by the Risk Ranking and Filtering Method, James H. Lambert, Con Way Ling and Yacov Y. Haimes, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p311-321.

Removing Incentives for Conflict, R. Wane Schneiter, CE Mar. 92, p6.

A Rule-Based System for Evaluating Final Covers for Hazardous Waste Landfills, Lewis A. Rossman and James T. Decker, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p161-173.

p161-173.

Hazardous waste sites

Cause and Mechanism of Failure Kettleman Hills Landfill B-19, Phase IA, R. John Byrne, J. Kendall and S.

Brown, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.

Boulanger, ed., 1992), p1188-1215.

Coal-Gas Conundrum, Deborah English, Carol Whitlock
and Dean Hargens, CE Mar. 92, 949-51.

Environmental Amenities and the Location of Industrial
Activity, Tim Allison and Frank Calzonetti, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992). p587-592.

1992), p587-592.

1992), p587-592.
Grouting for Hazardous Waste Site Remediation at Necco Park, Niagara Falls, New York, K. D. Weaver, R. M. Coad and K. R. McIntosh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1332-1343.
Impact of Present Data Validation Practices on Risk Assessment of Hazardous Waste Sites, V. Balasundaram, C. Minch and N. Shashidhara. (Environmental Engineering: Saving a Threatened Resource—In Search of Soutions, F. Pierce Linaweaver, ed., 1992), p561-574.
Mandated Public Participation in Siting of Hazardous and Conventional Waste Facilities: The Illinois Experience, Rabel J. Burdge, (High Level Radioactive Waste

Mandated Public Participation in Siting of Hazardous and Conventional Waste Facilities: The Illinois Experience, Rabel J. Burdge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1909-1916.

Perceived Risk Impacts from Siting Hazardous Waste Facilities, R. C. Hemphill, B. K. Edwards and G. W. Bassett, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p582-586.

Responding to Public Opinion About Cumulative Long-Term Risks: Analysis and Communication of Risks from Climate Change and Hazardous Waste Sites, Robert E. O'Connor and Richard J. Bord, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p57-77.

Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinipour and Vincent M. Gorokhovski, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p186-191.

Versatile Imaging System Assesses Hazwaste Sites, CE Oct. 92, p15.

Hazards
Acquisition of Expert Judgment: Examples from Risk Assessment, Stephen C. Hora, EY Aug. 92, pl.36-148.
Risk Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, M. A. Cassaro, M. J. Cassaro, R. K. Ragade and S. Alexander, (Lifetine Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p29-42.
Successful Interactions Between Hydraulic Engineering and Geomorphology in Identifying Flood Hazard Areas in the Southwestern United States, Richard H. French and Jeffrey R. Keaton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p581-586. p581-586.

Design of Trapezoidal Expansive Transitions, Prabhata K. Swamee and Bharat C. Basak, IR Jan./Feb. 92, p61-

Head Losses in Storm Sewer Manholes: Submerged Jet Theory, Flemming Bo Pedersen and Ole Mark, HY Nov. 90, p1317-1328.

Unit Hydrograph Derivation Using Geographic Informa-tion System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12.

Health hazards

Alternative Fuels and Their Relations to TCM's for Santa Barbara County, Mahesh Talwar, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992),

Dealing with Uncertainty: From Health-Risk Assessment to Environmental Decision Making, Anthony L. Cox, Jr. and Paolo F. Ricci, EY Aug. 92, p77-94.

Incineration—Panacea or Pandemic' Harvey W. Rogers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p157-162.

Mass Transfer of Volatile Contaminants in Showers, John C. Little, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Medical Care on the Moon, Ron Schaefer, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 728-1737.

1992), p1/28-1/37. Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, J. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p236-259.

Nitrate Risk Management under Uncertainty, Yong W. Lee, Mohamed F. Dahab and Istvan Bogardi, WR Mar/Apr. 92, p151-165.

Space Habitat Contaminant Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1370-1378.

Space Habitat Environmental Health: A Systems Issue, Jon R. Schulz and Ralph N. Eberhardt, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2023-2034.

Understanding the Medical Applications of Radionu-clides, Darrell W. McIndoe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1478-1484.

Water, Endangered Ecosystem: Assessment of Chemical Pollution, Werner Stumm, EE July/Aug. 92, p466-476.

Interpolation Functions for Use with ORIGEN-2 Data, R. S. Moore, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p77-81.

Combined Natural Convection and Surface Radiation in the Annular Region Between a Volumetrically Heated Inner Tube and a Finite Conducting Outer Tube, S. E. Gianoulakis and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p805-812.

Combustion Synthesis of Advanced Materials, J. J. Moore, H. J. Feng, N. Perkins and D. W. Readey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1389-1400.

Convective Heat Transfer in Spent Fuel Canisters, M. Keyhani and F. A. Kulacki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p773-778.

Management Program Commune, 1992), p773-778.
Coupled Heat and Moisture Transport Model for Underground Climate Prediction, G. Danko and P. Mousset-Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p790-798.

Nonisothermal Viscopiasticity, Marc Benowitz and Ma-ciej P. Bieniek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p244-

Predictions of Thermal Characteristics for Mixed Porous Media, Yueying Deng, Clifford B. Fedler and James M. Gregory, MT May 92, p185-195.

Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange", John Zachar and Tarun R. Naik, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p107-115.

Slip Velocity and Temperature Jump in Flow over Rough Surface, J. B. Zhang and V. H. Chu, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p604-607.

Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p539-542. Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, EM Aug. 92, p1661-1678. Temperature Scenarios for a Repository at Yucca Mountain, Benjamin Ross, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p784-789. Validation of the TEXSAN Thermal-Hydraulic Analysis Program, S. P. Burns and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p799-804.

p799-804.

Heat treatment
Densification/Creep Behavior of Experimental GlassCeramic Waste Forms for Immobilization of HighLevel Calcined Waste at the Idaho Chemical Processing Plant, Krishna Vinjamuri, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p300-303.

Fracture Toughness of DMMC, Richard J. Arsenault,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p228-231.
Optimum Design of Laminated Composites, R. S. Salzar,
F. W. Barton and R. D. Ramsey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),
p1323-1334.

Phase Stability of Simulated Nuclear Waste Glasses, I.

Phase Stability of Simulated Nuclear Waste Glasses, I. Joseph, T. V. Palmiter and L. D. Pye, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p911-916.

p911-916.
Risk Consistent Estimate of Heat-Straightening Applications. I: Plates, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409.
Risk Consistent Estimate of Heat-Straightening Applications. II: Beams, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426.

Heated water

3-D Modelling of Heat Discharge from Ul-Jin Power Plant into Coastal Waters of Korea East Sea, Young Jae Ro, Tae In Kim, Ha Keun Sung and Suk Woo Lee, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p501-512.

Heating
Forensic Analysis Techniques for Joint Sealants, Rogers
T. Graham and Larry N. Lynch, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed. 1992), p404-414.
Geochemical Model for 14C Transport in Unsaturated
Rock, Richard B. Codell and William M. Murphy,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1959-1965.
In-situ Release of Solar Wind Gases from Lunar Soil,
Layton J. Wittenberg, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p537-546.
Modeling of Soil Venting Processes to Remediate Unsaturated Soils, Suresh Lingineni and Vijay K. Dhir, EE
Jan./Feb. 92, p135-152.

Jan. Peto. 94, p135-132. Potential Increases in Natural Radon Emissions Due to Heating of the Yucca Mountain Rock Mass, C. Pescatore and T. M. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1599-1606.

Radioelements and Their Occurrence with Secondary Minerals in Heated and Unheated Tuff at the Nevada Test Site, S. Flesser and H. A. Wollenberg, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1593-1598.

p1593-1598.
Simple and Efficient Methods to Produce Construction
Materials for Lunar and Mars Bases, Yoji Ishikawa,
Tetsuo Sasaki and Tetsumi Higasayama, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p133-1346.
Winter Operability: Equipment Problems and Their
Remedies, Deborah Diemand, CR Sept. 92, p124-137.

Heaving
Design of Floating Stone Columns in Hydraulic Fill, Raymond A. DeStephen, David W. Kozera and Frank J. Swekosky, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p829-841.

Settlement Reduction by Soil Fracture Grouting, Mario J. Pototschnik, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p398-409.

Han Juran, ed., 1992), p398-409.

Heavy metals
Characterization of a Heavy Metal Contaminated Site,
M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty,
I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p463-467.

Effect of Collector Dosage on Metal Removal by Precipitation/Flotation, Venbakm C. Gopalratnam, Gary F.
Bennett and Robert W. Peters, EE Nov./Dec. 92,
p923-948.

Metallurational Parisher, Science of Action Processing Search of Science Search S

p923-948.

Metallurgical Residue for Solubilization of Metals from Sewage Sludge, D. Couillard and G. Mercier, EE Sept./ Oct. 92, p808-813.

Mitigation of Acidic Mine Drainage: Engineered Soil Barriers for Reactive Tailings, Abdel-Mohsen O. Mohamed, Raymond N. Yong and Boon K. Tan, Eevinonmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462.

Partitioning of Elements by Refuse Processing, Robert K. Ham, Victor A. Hammer and Gary Boley, EE Sept./ Oct. 92, p725-743.

Sensor Can Get the Lead Out. CE Oct. 92, p8.

Sensor Can Get the Lead Out, CE Oct. 92, p8. Soil-Washing Plant to Help Dirt Come Clean, CE Aug. 92, p14.

Hedger, Harold E. Death Claims Two Honorary Members of ASCE, CE Apr. 92, p68,70-71.

Height International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teresa Bowen MacArthur, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p569-574.
Orthometric Heights from Global Positioning System, Jerome Fiedler, SU Aug. 92, p70-79.

Uplift Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaly, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

## Herbicides

Herbicides

Assessing the Leaching Potential of Herbicides at the Ohio MSEA, S. R. Workman, A. D. Ward and W. G. Knisel, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p413-418.

Atrazine Biodegradation in Biological GAC Columns, M. K. Banks and C. M. Huang, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p516-519.

Treatability Study of Granular and Biological Activated Carbon for Groundwater Containing Fenac, a Herbicide, Chen-yu Yen and Rong-Jin Leu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p104-109.

Heuristics
Pre-Test Selection of Static Force and Displacement
Measurement Locations for Damage Assessment,
Masoud Sanayei, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p567-570.

High occupancy vehicles HOV Lessons, Katherine F. Turnbull and Dennis Chris-tiansen, CE Sept. 92, p74-75.

Hals strength concrete,
High strength concrete,
An Elastoviscoplastic Model for High Strength Concrete,
Tianxi Tang, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p856-859.
Evaluation of Compressive Strength for High-Strength
Concrete by Pulse Velocity Method, R. Sri Ravindrarajah, (Nondestructive Testing of Concrete Elements and
Structures, Farhad Ansari, ed. and Stein Sture, ed.,
1992), p115-126.

High Strength, Low Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p363-372.

Mechanical Properties of High Performance Concretes, Shuaib H. Ahmad, Paul Zia, Mike Leming and M. R. Hansen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p864-867.

Normal- and High-Strength Fiber-Reinforced Concrete under Compression, A. Samer Ezeldin and Perumalsamy N. Balaguru, MT Nov. 92, p415-429.

Properties of Aggregate-Cement Interface for High Per-

samy N. Balaguru, MT Nov. 92, p415-429.

Properties of Aggregate-Cement Interface for High Performance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedswecki, ed., 1992), p832-855.

Pullout Testing of High-Strength Concrete Members, Ronald L. Dilly and Michael Abshire, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p194-205.

Rate Effects in Uniaxial Dynamic Compression of Concrete, Tianti Tang, Lawrence E. Malvern and David A. Jenkins, EM Jan. 92, p108-124.

Review and Evaluation of the Use of Microsilica as an Admixture in Concrete, Brett Gunnink and Fahad Alnowaiser, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth Libergeson, ed., 1992), p92-103.

High strength steel
Debonding of a Inhomogeneity from a Plastic Matrix,
Alan J. Levy, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p252-255.

Fatigue of Welded Cruciforms Subjected to Narrow-Band Loadings, S. Sarkani, D. P. Kihl and J. E. Beach, EM Feb. 92, p296-311.

Parametric Study of Continuous Prestressed Composite Girders, Wenxia Tong and Hamid Saadatmanesh, ST Jan. 92, p186-206.

Halp technology

Is Advanced Technology "The Gateway to Irresponsibility?", Jon E. Zufelt, El Oct. 89, p434-437.

The National Aero-Space Plane Program—A Revolutionary Concept, Robert R. Barthelemy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2382-2391.

Technology is Here—Are You Ready? Paul A. LeMenager, ME July 92, p261-266.

Highway accident potential Florida Students Grin and 'Bear' It, CE June 92, p11.

Highway construction

Highway construction
Dynamic Compaction Engineering Considerations,
Robert G. Lukas, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O. Holtz,
ed. and Ilan Juran, ed., 1992), p940-953.
Europeans Get What They Pay For, CE Sept. 92, p11.
The Evolution of an Environmental Monitor, Peter J.
Dodds and R. Scott Sternberger, CE June 92, p56-58.
Highway Construction and a Trout Stream Relocation,
James Seksinsky, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p413419. 419

Highway Construction Use of Wastes and By-Products, Robert J. Collins and Stanley K. Ciesielski, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p140-152.

1992), p140-152.
Improving Steep Bends as Hairpin Curves on Mountainous Roads, B. K. Roy, TE Sept./Oct. 90, p667-682.
The Last Freeway, Jack Hallin, CE May 92, p60-63.
Leveraging the Use of Geographic Information Systems in Highway Corridor Studies, David D. Metcalf and Mark R. Urban, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p174-181.
Life in the Fast Track, Richard L. Ridings and Stephen B. Quinn, CE Apr. 92, p46-49.
Procedures for Evaluating Aggregate Gradation Specifications, Edwin C. Novak, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p261-274.
Start-Ups, CE Apr. 92, p8.
Start-Ups, CE Mar. 92, p8.
Start-Ups, CE Mar. 92, p8.

Technology Issues for Enhancing Waste Material Utilization in Highway Construction Addressed by the SHRP-IDEA Program, K. Thirumalai, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p1-8.

Transportation for Hong Kong Requires Solutions to Issue and Problems, C. K. Chow, El July 92, p294-306. U.S. Army Corps of Engineers and Afghanistan's Highways 1960-1967, Frank N. Schubert, CO Sept. 91, p445-459.

Use of Rubber Tires in Highway Construction, Imtiaz Ahmed and C. W. Lovell, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p166-181.

he Use of Road Impact Fees in the United States, James C. Nicholas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p164-169.

Highway design Exact Minimum Sight Distance on Sag Curve with Cen-tered Overpass, Said M. Easa, TE July/Aug. 92, p588-592.

Highway Construction and a Trout Stream Relocation, James Seksinsky, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p413-419

Highway Design in 3-D, Richard D. Sullivan, CE June 92, p68-70.

p68-70. Improving Steep Bends as Hairpin Curves on Mountainous Roads, B. K. Roy, TE Sept./Oct. 90, p667-682. An Integrated Approach to Highway Design and Environmental Impact Analysis Using GIS and CADD, William L. Galbraith, Joseph G. Anthony and Anne Sullivan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p161-167.

Integrated Drainage Design, Bernard L. Golding, CC Dec. 92, p1-6.

92, p. 1-0.

Reexamination of Directional Distribution of Highway Traffic, Satish C. Sharma and Awadhesh K. Singh, TE Mar/Apr. 92, p323-337.

Steering Clear of Tort Claims, Daniel S. Turner and Joseph D. Blaschke, CE July 92, p54-56.

Use of a Geographic Information System for the Highway Design Review Process, Hosin Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p153-160.

Highway eagineering Steering Clear of Tort Claims, Daniel S. Turner and Jo-seph D. Blaschke, CE July 92, p54-56.

Highway improvements California's Recession Remedy, CE Sept. 92, p11 California's Recession Remedy, CE Sept. 92, p11.

An Integrated Approach to Highway Design and Environmental Impact Analysis Using GIS and CADD, William L. Galbraith, Joseph G. Anthony and Anne Sulivan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p161-167.

Leveraging the Use of Geographic Information Systems in Highway Corridor Studies, David D. Metcalf and Mark R. Urban, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p174-181.

Procedures for Estimating Accident Reductions on Two Lane Highways, Rahim F. Benekohal and Asma M. Hashmi, TE Jan. Feb. 92, p111-129.

Te Traffic Impact Study and Traffic Impact Fees. Timo-

The Traffic Impact Study and Traffic Impact Fees, Timo-thy T. Jackson, (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p228-232.

Highway maintenance Crack Filling Goes Mobile, CE Apr. 92, p17-18. Fast-Track Slide Fix, CE Dec. 92, p19-20.

Highway planning
Computerized Management Systems for Pavement Networks, Kathryn A. Cation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 2293-300.

Reexamination of Directional Distribution of Highway Traffic, Satish C. Sharma and Awadhesh K. Singh, TE Mar./Apr. 92, p323-337.

Highway safety
Aspects of Road-Accident Death Analyses, John C.
Golias and Helen S. Tzivelou, TE Mar./Apr. 92, p299-

Estimating Truck's Critical Cornering Speed and Factor of Safety, Francis P. D. Navin, TE Jan./Feb. 92, p130-

143. Improving Steep Bends as Hairpin Curves on Mountainous Roads, B. K. Roy, TE Sept./Oct. 90, p667-682. The Isolated Signalized Intersection as a Mitigation on a High-Speed Highway, Thomas C. Ferrara, A. Reed Gibby and Simon P. Washington, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p57-61.

Highway structures
Simulated Field Trials of Non-Destructive Concrete Test
Methods for Highway Structures, John A. Bickley and
Paul Read, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein
Sture, ed., 1992), p162-170.

Sture, ed., 1992, of Rox Culverts, Shad M. Sargand,

Structural Evaluation of Box Culverts, Shad M. Sargand, Glenn A. Hazen and John O. Hurd, ST Dec. 92, Glenn A. F p3297-3314.

Highway surfaces
Caltrans is on the Road Again, CE June 92, p11.
Numerical and Analytical Description of Highway Surface Roughness, Ton-Lo Wang, Mohsen Shahawy and Dongzhou Huang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p309-316.

The World's Smallest Road CE Nov. 92, p10.

The World's Smallest Road, CE Nov. 92, p10.

The World's Smallest Road, C.E. Nov. 92, p10.

Highway transportation

Alameda Transportation Corridor, Arthur B. Goodwin, (Ports '92, David' Torseth, ed., 1992), p94-107.

Criticality Safety and Shielding Design Issues in the Development of a High-Capacity Cask for Truck Transport, Jack K. Boshoven, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2156-2160.

Development Status of the GA-4 and GA-9 Casks, Robert M. Grenier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1832-1838.

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels,

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels, J. S. Grant, P. M. Boocock and C. J. Ealing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2227-2234.

1992), p2227-2234.

An Integrated Approach to Highway Design and Environmental Impact Analysis Using GIS and CADD, William L. Galbraith, Joseph G. Anthony and Anne Sulivan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p161-167.

A Microcomputer-Based Model for Identifying Urban and Suburban Roadways with Critical Large Truck Accident Rates, J. D. Brogan and J. W. Cashwell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p432-436.

Highway usage Bridge Evaluation for Multipresence of Vehicles, Baidar Bakht and Leslie G. Jaeger, ST Mar. 90, p603-618.

Highways

Access Management—Myth or Reality, Herbert S. Levin-son and Frank J. Koepke, (Site Impact Traffic Assess-ment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p62-

Airport Landside Management: An Unique Airport Spe-cialty, Louis A. Turpen, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p212-222.

Discharge Capacity for Curb-Opening Inlets, Ali Uyu-maz, HY July 92, p1048-1051. Estimating Truck's Critical Cornering Speed and Factor of Safety, Francis P. D. Navin, TE Jan/Feb. 92, p130-145.

An Evaluation of Highway Flood Damage Statistics, Jen-nifer Rhodes and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1082-1087.

Hydrologic Investigation of the April, 1983 Flooding in New Orleans, Louisians, Michael A. Ports, (Water Re-sources Flanning and Management: Saving a Threat-end Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p260-267.

Improved Resilient Modulus Realized with Waste Prod-uct Mixtures, Seung W. Lee and K. L. Fishman, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. 1356-1357.

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91,

p242-258.

Bridge Inspection, Enno Koehn and N. A. Barroeta, El Apr. 91, p133-149.

he Isolated Signalized Intersection as a Mitigation on a High-Speed Highway, Thomas C. Ferrara, A. Reed Gibby and Simon P. Washington, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p57-61.

The Last Freeway, Jack Hallin, CE May 92, p60-63.

Mechanical Properties of High Performance Concretes, Shuaib H. Ahmad, Paul Zia, Mike Leming and M. R. Hansen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p864-867.

Hansen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p864-867.
Optimal Allocation of Resources in Repair and Maintenance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4.
Overview of Permeable Bases, Robert H. Baumgardner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p275-287.
Pavement Surface Maintenance: Overview of SHRP H-106 Experimental Installations, Russell Romine, David Peshkin, Kelly Smith and Tom Wilson, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p146-159.
Performance of Epoxy-Coated Steel in Continuously Reinforced Concrete Pavement, Farrel J. Zwerneman, Rex C. Donahey, Hameed S. Syed and Srinivas R. Gunna, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p339-332.

p339-352.

Performance of Recycled Asphalt Concrete Materials in an Arid Climate, Mustaque Hossain and Larry A. Sco-field, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p415-427.

Planning for Movement of Very Large, Slow-Moving Vehicles, John Morrall, Walid Abdelwahab and Al Werner, TE May/June 92, p381-390.

Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange", John Zachar and Tarun Raik (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p107-115.

Procedures for Estimating Accident Reductions on Two-Lane Highways, Rahim F. Benekohal and Asma M. Hashmi, TE Jan./Feb. 92, p111-129.

The Roads Ahead, Teresa Austin, CE Apr. 92, p54-57.
The Roads Ahead, Teresa Austin, CE Apr. 92, p54-57.
The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p80-91.

The SHRP-LTPP Asphalt Resilient Modulus Pilot Study, William O. Hadley and Jonathan L. Groeger, (Material: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p130-145.

Failures, I nomas D. Wnite, ed., 1992, pl. 30-143. Simulated Field Trials O Non-Destructive Concrete Test Methods for Highway Structures, John A. Bickley and Paul Read, (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p162-170.

Statistical Evaluation of Truck Overloads, Jamshid Mohammadi and Nadir Shah, TE Sept./Oct. 92, p651-

Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chilcote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p.1-14.

Three Dimensional Models in CADD, Cynthia Gagnon and Brian Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.434-442.

Traffic Impact Fees in Schaumburg, Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.170-174.

Hinges Moving Hinge in Large-Displacement Problems, F. Lu and A. N. Sherbourne, EM Sept. 92, p1840-1849.

Histograms
Intermediate Level Waste Transport Shielding Study, M.
H. Dean, L. S. Grindrod, S. M. Jones and R. W. T.
Sieweright, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2062-2068.

## Historic sites

Lehigh's Fritz Laboratory is Civil Engineering Landmark, NE Oct. 92, p15. Retrofitting a Landmark, David L. Houghton, CE Feb. 92, p55-57.

exas Memorial Attains ASCE Landmark Status, CE Dec. 92, p75.

History
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Exhibit Will Document War-Era Construction, CE Sept.

92, p22 Field Tr

92, p22.
 Field Trip—Cleveland East Breakwater Inspection, Thomas J. Bender, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and Wil-liam F. Baird, ed., 1992), p270-272.
 Lehigh's Fritz Laboratory is Civil Engineering Landmark, NE Oct. 92, p15.
 The Theory of Elasticity: 1950-1992 and Beyond: Con-cluding Remarks, Lawrence E. Goodman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p637-639.

Holes
Constant Hole-Spacing Trail Tubes, S. T. Chu and H. M.
Bagherzadeh, R. Jan./Feb. 92, p166-178.
Novel Photoelastic Approach in Analysis of Elliptical
Holes in Thick Plates, Sameh S. Issa and G. A.
Maamoun, EM Aug. 92, p1631-1645.

Hollow sections
Behavior of Concrete Hollow-Block Masonry Prisms
under Axial Compression, T. P. Ganesan and K.
Ramamurthy, ST July 92, p1751-1769.
Square and Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Mar. 92, p648-668.
T-Joints in Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Aug. 91, p2258-2277.

Hong Kong Port Facilities, Airport, and Housing Require New Concepts, C. K. Chow, El Oct. 92, p403-414.

Many Engineering Issues and Challenges Met in Development of Hong Kong, C. K. Chow, El Jan. 92, p60-70.

New Hong Kong International Airport, Tom Darmody and Peter Wright, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p272-280.

Resolving Construction Disputes by Mediation: Hong Kong Experience, Kwok-Wing Chau, ME Oct. 92, p384-393.

p.384-393.
Transportation for Hong Kong Requires Solutions to Issues and Problems, C. K. Chow, El July 92, p294-306.
Use of GlS for Resource Management in Hong Kong, Jan R. Selwood and Peter G. D. Whiteside, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p942-949.

Pattern Formation and Time-Dependence in Flowing Sand, R. P. Behringer and G. W. Baxter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1028-1030.

Application of Centrifuge Modeling Technique to Slopes and Embankments, Dobroslav Znidarcic, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p521-

Centrifugal Modeling of Drains for Slope Stabilization, Gregory S. Resnick and Dobroslav Znidarčić, GT Nov. 90, p1607-1624.

Hydraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rice, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-

Drawdowns for Constant-Discharge One-Dimensional Leaky Aquifer, Louis H. Motz, IR May/June 90, p456-461.

Medical Care on the Moon, Ron Schaefer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1728-1737.

Stochastic Response of a Caster-Mounted System, Michael A. Moser and Wilfred D. Iwan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p316-319.

## Hot dry rock

Novel Combined-Cycle Low-Temperature Engine Sys-tem, Joel H. Rosenblatt, EY Dec. 92, p209-223.

## Hot weather construction

Strength and Shrinkage of Natural Pozzolanic Mortar in Hot Weather, Jihad S. Sawan, MT May 92, p153-165.

Affordable Financing—The Crux of Affordable Housing, Rodolfo J. Aguilar, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p75-81.

Case Study: Design of a Traditional Village Master Plan, Raul J. Cotilla, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p111-120.

Computer Modeling of Structural Systems for Residential Scale Buildings, Richard A. Ebeltoft, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p58-65.

Concrete Modules Lead to Instant High-Rise Housing, CE Mar. 92, p10.

Customer Requirements in Industrialized Housing, Robert L. Armacost, Paul J. Componation, Michael A. Mullens and William W. Swart, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

Developers to Pay into Fund for Worker's Housing, CE Feb. 92, p28.

FEMA Study Evaluates Postdisaster Housing, CE Aug. 92, p13.

The Future Role of Factory Built Housing, Fred C. Hal-lahan, Jr., (Housing America in the Twenty-First Centu-ry, Mehmet Inan, ed., 1992), p29-38.

Group Explores Eastern Bloc Market, CE June 92, p11. Hong Kong Port Facilities, Airport, and Housing Require New Concepts, C. K. Chow, El Oct. 92, p403-414.

Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992, 0-87262-898-1, 127pp.

Housing Chernobyl Relocatees, William H. Claire, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p19-28.

Housing Opportunity or Social Engineering Implement-ing the Jobs-Housing Relationship—The Town of Wel-lington Experience, Jean E. Lindsey, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992). p82-90.

Housing—Economic Standard, D. Eliakim, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p66-74.

Land Development Regulations: Roadblock to Affordable Housing, Thomas J. Olenik and S. L. Cheng, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p39-47.

Multifamily Housing is a Right, CE Apr. 92, p24,26. No Need to Sell When the Kids Move Away, CE Apr. 92, Performance Specifications for the Design and Manufac-ture of Energy Efficient Housing in the 21st Century, Ronald Kellett, Mark DeKay, Brook Muller, Donald Peting and G. Z. Brown, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p101-110.

A Proposed Revised State Zoning Enabling Act, George W. Liebmann, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p91-100.

Housing costs
Land Development Regulations: Roadblock to Affordable
Housing, Thomas J. Olenik and S. L. Cheng, (Housing
America in the Twenty-First Century, Mehmet Inan,
ed., 1992), p39-47.

uman behavior

Human behavior
Case Studies of Structures with Man-Induced Vibrations,
H. Bachmann, ST Mar. 92, p631-647.
Competition Leads to Losing, Frank Pierce Johnson, ME
July 90, p258-261.
Design Live Loads for Coherent Crowd Harmonic Movements, A. Ebrahimpour and R. L. Sack, ST Apr. 92,
p1121-1136.

p1121-1136. Existentialism, Engineering, and Liberal Arts, David A. Bella, El July 90, p309-321. Integrated Assessment of Environmental Risk and Human Response, Mitchell J. Small, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, p78-91.

The Monitoring of Water Conservation Behavior and At-titudes in Southern California, Duane D. Baumann, Eva Opitz and Diane Egly, (Risk-Baued Decision Mak-ing in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992), pl 17-A. M 134.

Tuned Mass Dampers for Balcony Vibration Control, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p723-740.

Tuned Mass Dampers to Control Floor Vibration from Humans, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p741-762.

Mar. 74, 7)4-17-02.

Human factors

An Analysis of Human Performance in Simulated Partial-Gravity Environments, Nathan R. Moore and David J. Gutierrez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2282-2292.
Factoring in the Human Factor, CE Sept. 92, p11.
Flow in a Model Symmetric Bifurcation, B. B. Lieber, Y. Zhao and J. H. Citriniti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p840-843.
Fluid Dynamics at the Carotid Bifurcation, A. S. Anayiotos, D. P. Giddens, S. A. Jones, S. Glagov and C. K. Zarins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-847.
A Horizontal Inflatable Habitat for Self, Kriss J. Kennedy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p153-146.
Human Error in Complex Systems, Douglas H. Harris, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1527-1533.
Human Exploration of Mars: The Role of a Mars Outpost

mittee, 1992, p1321-1333. Human Exploration of Mars. The Role of a Mars Outpost Laboratory, Michael B. Duke, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p43-

The Human Factor in Failures, George F. Sowers, CE Mar. 91, p72-73.

Mar. 91, p72-73.

Human Factors and System Safety in the Management of High-Level Radioactive Waste, Mary L. Lozano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1342-1346.

Human Factors Programs for High-Level Radioactive

Human Habitat Design for the Space Exploration Initiative, Robert Boyd, Scott Geels, Benton C. Clark and Carolyn Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p25-533.

The Human Side of Systems, Harold E. (Smoke) Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1534-1541.

Identification of Inappropriate Driving Behaviors, John M. Mason, Jr., Kay Fitzpatrick, Deborah L. Seneca and Thomas B. Davinroy, TE Mar/Apr. 92, p281-298.

Internal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2360-2366.

Lumped Parameter Model for the Dynamics of the Pul-monary Circulation, B. B. Lieber, Z. Li and B. J. B. Grant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p848-851.

and John M. Niedzwecki, ed., 1992), p848-851.

Lunar Base Requirements for Human Habitability, Gary
T. Moore, Kerry L. Paruleski, Janis Huebner-Moths,
Joseph P. Fieber and Patrick J. Rebholz, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p224-239.

Lunar Habitats—Places for People, Robert Pfeifer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 83-188.

A Multiple Disk Centrifugal Pump as an Artifical Ventri-cle, Gerald E. Miller and Amrita Sidhu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p976-979.

Nieutwecki, ed., 1992, pp. 95-979.
The Need for a True System Approach for High-Level Waste Management Systems Engineering Recommenations from the U.S. Nuclear Waste Technical Review Board, Dennis L. Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p822-826.

ment Program Committee, 1992, po2-20.

An Operational Evaluation Process for Long-Duration Mission Habitats in Space, M. Novara, E. Raffner and D. Antonelli, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Pressure Suit Requirements for Moon and Mars EVA's, Eric M. Jones and Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1701-1708.

1992), pl 101-108. Telerobotic Field Geologist: Preliminary Results of a Feasibility Study, Robert E. Cole, Charlotte Albert-Thenet, G. Jeffrey Taylor, Paul Johnson, Forrest Buzan, Joy Ishigo and Curtis Ikehara, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 434-1442.

Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, D. W. Ming, D. C. Golden and D. L. Henninger, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), and the construction of the constructio

## Human rights

Regarding Nature as Raw or Cooked, Margaret N. Max-ey, CE Oct. 91, p61-63.

Trouble in Computer Paradise, Brian Brenner, CC Aug. 92, p12-13.

## Humic substances

Removal of Trihalomethane Precursors by Ferric Chlo-ride Coagulation, Anne Studstill and Appiah Amirtharajah, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p526-531.

Damage Doesn't Reach the Beach, CE Dec. 92, p8.

Deep Water Container Wharf & Crane Foundation, John E. Gant, (Ports '92, David Torseth, ed., 1992), p238-

Design of Protective Dunes at Dam Nock, Virginia, John R. Headland, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p251-267.

Dynamic Response Characteristics of Jack-Up Drilling Units, David T. McDonald and Robert G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p906-920.

Empirical Simulation of Future Hurricane Storm Histo-ries as a Tool in Engineering and Economic Analysis, Leon Borgman, Martin Miller, Lee Butler and Robin Reinhard, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p42-65.

F. Thudspein, ed., 1992), p2-03.
Estimation of Wind Fields for Coastal Modeling, Edward
F. Thompson and Zeki Demirbilek, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p564-573.

Craig Swanson, ed., 1992), p304-373.
Hurricane Camille Shelf Wave Simulation Using a Numerical Ocean Circulation Model, Le Ngoc Ly and Lakshmi Kantha, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p366-593.

The Landfall of Hurricane Hugo, Billy L. Edge, Ben L. Sill and Orville T. Magoon, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p988-993.

Tide and Hurricane Storm Surge Computations for the Western North Atlantic and Gulf of Mexico, Joannes J. Westerink, Julia C. Muccino and Richard A. Luettich, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p538-550.

Hydration

Anisotropic Behavior of Cement-Grouted Sand, Ray-mond J. Krizek and Maan Helal, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p541-

Journal of Compression-Induced Cracking in Cement Paste, David Darwin, Kirk W. Ketcham, Francisco A. Romero and Jeffrey L. Martin, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497. Automated

On the Modelling of Damage Due to Volumic Variations in Cementitious Composites, Jacky Mazars and Jean Pierre Bournazel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p482-

Steam Injection System for Lunar Concrete, Dennis M. Pakulski and Kenneth J. Knox, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1347-1358.

Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, J. B. Case, J. A. Fernandez and J. R. Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2298-2305.

Hydraulic conductivity

Analysis of Recharge in Anisotropic, Layered, Saturated-Unsaturated Soil, Abolfazl Shamsai and Miguel A. Mariño, IR July/Aug. 92, p584-600.

manno, in YunyAu, Y., post-toto.

Analysis of Soil-Air Permeability and Saturated Hydraulic Conductivity for Remedial System Design, Hamid G. Bojd and B. V. Nanjundeswar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p321-326.

Application of Neural Network to Groundwater Remediation, J. H. Garrett, Jr., S. Ranjithan and J. W. Eheart, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p259-267.

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pp. 1972-1985. p1972-1984.

Design of Landfill Drainage Systems, Bruce M. McEnroe, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p208-213.

Effects of Freezing on Hydraulic Conductivity of Com-pacted Clay, Woon-Hyung Kim and David E. Daniel, GT July 92, p1083-1097.

Evaluation of Collection-Well Parameters for DNAPL, K. Schmidtke, E. McBean and F. Rovers, EE Mar./Apr. 92, p183-195.

Hydraulic Conductivity of Landfill Liners Containing Benzyltriethylammonium-Bentonite, James A. Smith, Pamela M. Franklin and Peter R. Jaffe, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p186-191.

Hydraulic Conductivity of Noncohesive Soils, B. Åberg, GT Sept. 92, p1335-1347.

Hydraulic Conductivity of Three Geosynthetic Clay Liners, Paula Estornell and David E. Daniel, GT Oct. 92, p1592-1606.

pl 392-1606.
 Hydraulic Conductivity of Three Landfill Clay Liners, Mark E. Gordon, Paul M. Huebner and Thomas J. Miazga, GT Aug. 89, pl 148-1160.
 Hydraulic Properties of a Fine-Grained Soil Under Various Capillary Pressures and Loadings, Aladdin Shaikh and John D. Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p648-653

Hydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, Victor R. Hasfurther and John P. Turner, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Soliutions, Ted Engman, ed., 1992), p395-400.

Including Uncertainty of Hydraulic Conductivity into Drainage Design, J. Gallichand, D. Marcotte and S. O. Prasher, IR Sept./Oct. 92, p744-756.

Prasher, IR Sept./Oct. 92, p744-756.
Indicator Variography for Spatial Characterization of Aquifer Heterogeneities, M. V. Cromer and R. M. Srivastava, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p420-425.
Potential Flow Solution for Ground Water Mounding, Tswn-Syau Tsay, John Hoopes, Craig Fergusson and Salwa Rashad, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p790.
Seerage Control in Kaolinite Clay with Simulated Cracks.

Seepage Control in Kaolinite Clay with Simulated Cracks, C. Vipulanandan and M. Leung, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1054-1066

Simulation of Runoff and Infiltration of Disturbed Land, Ben Chie Yen and Robert Riggins, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p401-406.Stabilizing Compacted Clay Against Chemical Attack, Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567. Simulation of Runoff and Infiltration of Disturbed Land,

Stochastic Analysis of Seasonal Hydraulic Conductivity, Ram Gupta, Ramesh Rudra, Trevor Dickinson, Naveen Patni and Greg Wall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p32-38.

Type Curves for a Slug Test in an Infinitely or Semi-infinitely Thick Aquifer, Gary R. Chirlin, (Symposium on Ground Water, Gerard P. Lennon, ed. and Shakrokh Rouhani, ed., 1991), p169-174.

Hydraulic design Assessing Uncertainty of Unit Hydrograph, Yeou-Koung Tung and Bing Zhao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p543-

Graphs for Hydraulic Design of Sanitary Sewers, Venka-teswarlu Swarna and Prasad M. Modak, EE May/June 90, p561-574.

Hydraulic Design of Offshore Breakwater in Sergipe, Brazil, Otavio J. Sayao and Charles P. Fournier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693.

Hydraulic Design of Perforated Breakwaters, M. Fugazza and L. Natale, WW Jan./Feb. 92, p1-14.

RCC for Rehabilitation of Dams in the USA-An Over-view, Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p22-46

Revised Hydraulic Design of the Los Angeles County Flood Control System, Michael E. Mulvihill and Scott E. Stonestreet, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612-617.

Stable Channel and Environmental Design Considerations for an Urban Flood Control Project, Edward F. Sing, Daniel Pridal and Thea Lane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p464-469.

Stochastic Simulation and Optimization of Irrigation Canal Network Flows, Timothy K. Gates, Abdelmohsen A. Alsaikh and Samir I. Ahmed, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p474-480.

Hydraulic engineering
Device Could Bypass Bed Load, Trap Pollutants, CE Aug. 92, p15. Four Divisions Gather at Water Forum, CE Oct. 92,

Four Divisions Gather at Water Forum, CE Oct. 92, p20,22.
Hydraulic Engineering: Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.
Influence of Liquid Length Variation in Hydraulic Transients, Enrique Cabrera, José Abreu, Rafael Pérez and
Antonio Vela, HY Dec. 92, p1639-1650.

Antonio Hydraulic fill
Design of Floating Stone Columns in Hydraulic Fill, Raymond A. DeStephen, David W. Kozera and Frank J. Swekosky, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p829-841.

Hydraulic fracturing
Compaction Grout: Rheology vs. Effectiveness, James
Warner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p229-239.

Juran, ed., 1992), p229-239.
Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p120-203.
Grouting Improvement of Foundation Soils, Francesco Gallavresi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1-38.
Hydraulic Fracturing in Embankment Dams (Paper in-

inetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl-38.

Hydraulic Fracturing in Embankment Dams (Paper introduced by Edward B. Petry), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p442-469.

Hydraulic Fracturing in Low Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p94-119.

Methods to Estimate Composition of Jet Grout Bodies, L. Joseph Kauschinger, Rachid Hankour and E. B. Perry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p194-205.

The Role of Soil Modification in Environmental Engineering Applications, James K. Mitchell and Wade A. Van Court, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p110-143.

Hydraulic gradients

Hydraulic gradients
Conversion Between Quadratic and Power Law for NonDarcy Flow, G. H. George and D. Hansen, H. May 92, p792-797.

pf 92-797.
HGL Elevation at Pipe Exit of USBR Type VI Impact Basin, Charles E. Rice and Kem C. Kadavy, HY July 91, p929-933.
Seepage Effects on Bridge Pier Scour, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p919-924.

Hydraulic Jets Hydraulic Demolition Preserves Historic Bridge, CE Aug. 92, p77.

24, ptf.
Hydraulle jump
1-D Open-Channel Flow Simulation Using TVD-McCormack Scheme, P. García-Navarro, F. Alcrudo and J. M. Savirón, HY Oct. 92, p1359-1372.
Analytical Hydraulic Modeling of Road Culverts, Rohin S. Saleh and Ralph Hwang, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 2703-931.

rownproofing of Low Overflow Structures, Hans J. Leu-theusser and Warren M. Birk, HY Feb. 91, p205-213.

Force on Slab Beneath Hydraulic Jump, Javad Farhoudi and Rangaswami Narayanan, HY Jan. 91, p64-82.

OUTFL—A Spreadsheet for Design of Adequate Storm Drainage Outfalls, Oner Yucel and Edward L. Lowman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p707-712.

Source Control of Intrusions Along Horizontal Boundary, J. Bühler, S. J. Wright and Y. Kim, HY Mar. 92, p442-

459

Three-Dimensional Thermal Jump in Stratified Cooling Channel, L. -L. Guo and R. E. Baddour, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p381-384.

Niedzwecki, ed., 1992), p381-389.
A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

Hydraulic models

Analytical Hydraulic Modeling of Road Culverts, Rohin S. Saleh and Ralph Hwang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p798-803.

Bank Erosion Study of the Nile River at Bani Mazar, A. F. Ahmed and M. M. Gasser, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p816-821.

Barbers Point Harbor: A Unique Solution for Port Up-grade, Michael J. Briggs and Eivind Bratteland, (Ports 92, David Torseth, ed., 1992), p777-790.

SAL DAVIS 1 (1954), p717-195 BRASS Modeling of Loiza Reservoir, Puerto Rico, for Sediment Management Operations, Gregory L. Morris, Raul Colón, Robert Laura and G. T. Anderson, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p837-842.

Comparison of ARS-Type Grade Control Model Testing and Prototype Response, C. Watson, N. Raphelt, P. Combs and S. Abt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p213-

Dynamic Plug Flow Reactor Network Model for Contam-inant Transport in Water Distribution Systems, James Uber, Ken Hickey, Mao Fang and Lew Rossman, (Hy-draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p772-777.

Flow Distribution in a Stacked Clarifier, M. Pad-manabhan, T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633.

Linaweaver, ed., 1992), p628-633.

Historo Basin Surface Water Management Model, David P. Preusch, Jayantha Obeysekera, John M. Crouse and Kendrick Logsdon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p810-816.

Hydraulic Design of Offshore Breakwater in Sergipe, Brazil, Otavio J. Sayao and Charles P. Fournier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693.

Model Tests for Expansion of Anabeim Bay Navel Har-

Model Tests for Expansion of Anaheim Bay Naval Har-bor, Robert R. Bottin, Jr. and Dan Muslin, (Ports '92, David Torseth, ed., 1992), p768-776.

Proposed Similarity Law for Surface Velocity in Hydrau-lic Models, Dajin Yu and Weijun Zhao, HY Sept. 92, p1318-1325.

Sampling of Wastewater Effluent, Heinz G. Stefan, Thomas R. Johnson and Hugh L. McConnell, EE Mar./Apr. 92, p209-225.

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p599-605.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Gradings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p64-81.

Transient Hydraulic Model for Simulating Canal-Network Operation, F. N. Gichuki, W. R. Walker and G. P. Merkley, IR Jan./Feb. 90, p67-82.

Water's New World, Laura Lang, CE June 92, p48-50.

Hydraulic performance

Design and Construction of Two Major Experiments at the URL, P. M. Thompson, B. H. Kjartanson and R. S. Read, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1082-1089.

Effluent Nitrite Accumulation in the Heterotrophic Denitrification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

ett., 1992), post-A Hydraulic Study of Venous Valve Closure, Shi-kang Wang, Yu-chen Qiu and Ned H. C. Hwang, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p697-700.

The Importance of Verified Simulation Model in a Sew age Rehabilitation Program, Phil Wildbore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p730-735.

Karamouz, ed., 1992, p. 190-733.
A System for Measuring Moisture Transients in Clay-Based Barrier Materials, A. W. L. Wan, B. H. Kjartanson, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1122-1128.

Two-Dimensional Hydraulic Analysis of the Owensboro Bridge and Approaches, M. A. Forts, T. G. Turner and D. C. Froehlich, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p280-

Water Main Rehabilitation Needs for the 1990's, D. Kelly O'Day, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Sohitions, Mohammad Karamouz, ed., 1992), p760-763.

Hydraulic pressure

Protected-Paste Volume of Air-Entrained Cement Paste. Part 1, K. Natesaiyer, K. C. Hover and K. A. Snyder, MT May 92, p166-184.

Hydraulic roughness
Boundary Shear Stress and Roughness Over Mobile Alluvial Beds, Peter J. Whiting and William E. Dietrich,
HY Dec. 90, p1495-1511.

Manning's Formula, Ben

Dimensionally Homogeneous Manning's Formula, Ben Chie Yen, HY Sept. 92, p1326-1332. Hydraulic Roughness Coefficients for Native Rangelands, Mark A. Weltz, Awadis B. Arslan and Leonard J. Lane, IR Sept./Oct. 92, p776-790.

Modern Approach to Design of Grassed Channels, N. Kouwen, IR Sept./Oct. 92, p733-743.

rayaraulic structures

Analysis of ARS Low-Drop Grade-Control Structure,
Steven R. Abt, Mark R. Peterson, Chester C. Watson
and Scott A. Hogan, HY Oct. 92, p1424-1434.

Design of Trapezoidal Expansive Transitions, Prabhata
K. Swamee and Bharat C. Basak, IR Jan./Feb. 92, p6173.

Hydraulic Structures Versus Zebra Mussels, John J. In-gram and Andrew C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611.

Incorporating Hydraulic Structures in an Open-Channel Model, Eric D. Swain, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992). p1118-1123.

Optimal Irrigation Delivery System Design under Uncertainty, Timothy K. Gates, Abdulmohsen A. Alshaikh, Samir I. Ahmed and David J. Molden, IR May/June 92, p433-449.

Probabilistic Methods in Hydroproject Maintenance, Walter O. Wunderlich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), n514-519.

Release Alternatives on a 3-D Salinity Simulation, Ber-nard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.237-242

Scour Downstream of Grade-Control Structures, Noel E. Bormann and Pierre Y. Julien, HY May 91, p579-594.

Stiffened Sheathings of Orthotropic Cylindrical Shells, P. Rigo, ST Apr. 92, p926-943.

## Hydraulic transients

Influence of Liquid Length Variation in Hydraulic Tran-sients, Enrique Cabrera, José Abreu, Rafael Pérez and Antonio Vela, HY Dec. 92, p1639-1650.

## Hydraulics

And The Company of the Company of

Adaptive Control of Ground-Water Hydraulics, LaDon Jones, WR Jan./Feb. 92, p1-17.

Addressing Bridge Sour When Funding Falls Short, John N. Paine, Robert J. Leedy, Jr. and James N. Wigfield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p204-209.

Analysis of Spiral Vortex and Vertical Slot Vortex Drop Shafts, Michael C. Quick, HY Mar. 90, p309-325.

Application of Optimal Hydraulic Control to Ground-water Remediation, David Ahlfeld and Manoutch water Remediation, David Ahlfeld and Manoutch Heidari, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1243.

Automated Diffusion Wave Modeling of Watershed Hy-draulics, Robert N. Eli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992).

p353-354

Balancing Hydraulic Requirements for Storage and Di-version in Planning Subsurface Facilities for the Con-trol of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.

Bayesian Inference for Feedback Control. II: Surface Irrigation Example, A. J. Clemmens and J. B. Keats, IR May/June 92, p416-432.

Beginning of Motion for Selected Unanchored Residue Materials, John E. Gilley and Eugene R. Kottwitz, IR July/Aug. 92, p619-630.

Brief Literature Review of Open-Channel Current Meter Testing, Kirk G. Thibodeaux, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p458-463.

Calculation of Total Conveyance in Natural Channels, J. Garbrecht and G. O. Brown, HY June 91, p788-798.

Closed Cycle Ocean Thermal Energy Conversion, F. A. Johnson, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p70-108.

Computation Method for Regulating Unsteady Flow in Open Channels, Fubo Liu, Jan Feyen and Jean Ber-lamont, IR Sept./Oct. 92, p674-689.

Computational Model Verification Test Case Using Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p436-441.

Conceptual Bed-Load Transport Model and Verification for Sediment Mixtures, Shaohua Marko Hsu and Forrest M. Holly, Jr., HY Aug. 92, p1135-1152.

Constant Hole-Spacing Trail Tubes, S. T. Chu and H. M. Bagherzadeh, IR Jan./Feb. 92, p166-178.

Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p355-

Darcy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, IR Jan./Feb. 92, p104-112.

Darcy-Weisbach Roughness Coefficients for Selected Residue Materials, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p481-486.

A Design Manual for Coastal Fluidization Systems, Richard N. Weisman, Gerard P. Lennon and James E. Clausner, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p862-878.

Dracy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p747-752.

Drawdowns for Constant-Discharge One-Dimensional

rawdowns for Constant-Discharge One-Dimensional Leaky Aquifer, Louis H. Motz, IR May/June 90, p456-

Drawdowns for Nonleaky Aquifer Flow with Storage in Finite-Width Sink, Louis H. Motz, IR July/Aug. 92, p645-651.

p645-651.

Drop Manholes in Supercritical Pipelines, George C. Christodoulou, IR Jan/Feb. 91, p37-47.

Efficient Sizing of Storm Water Treatment Ponds, Thomas R. Sear and Brenda van Ravenswaay, (Water Resources Planning and Management: Saving a Threatmend Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

An Evaluation of Highway Flood Damage Statistics, Jennifer Rhodes and Roy Trent, (Hydraulic Engineering: Saving a Threatmend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1082-1087.

Evaluation of Supercritical/Subcritical Flows in High-

Evaluation of Supercritical/Subcritical Flows in High-Gradient Channel, Douglas J. Trieste, HY Aug. 92, p1107-1118.

p110/-1116.

Flow Field Induced by Sea Waves Over Brick-Pattern Ripples, G. Vittori, HY Sept. 92, p1241-1259.

Furrow Flow Velocity Effect on Hydraulic Roughness, Thomas J. Trout, IR Nov/Dec. 92, p981-987.

Future Trends and Needs in Hydraulics, Daryl B. Simons, HY Dec. 92, p1607-1620.

Geomorphic and Hydraulic Exeters 4 Maries Science Scie

Simons, HY Dec. 92, p1001-1020.
Geomorphic and Hydraulic Factors Affecting Stream Stability at New York Thruway Bridges, Sufian A. Khondker, Keith E. Giles, Carl J. Montana and Mark A. Hisson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p912-918.
HEC-2 Shells and Tools, Cheryl Johnson, CC Apr. 92,

p1,4-14.

Hydraulic and Geomorphic Classification of the Upper Mississippi River System: Pilot Study of Three Pools, Nani G. Bhowmik and Renjie Xia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p666-671.

Hydraulic Controls on Delaware Estuary Water Quality, Joseph L. DiLorenzo, Georgia R. Marino, Poshu Huang, Tavit O. Najarian and M. Liewellyn Thatcher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p151-157.

Hydraulic Engineering: Saving a Threatened Resource—Hydraulic Engineering: Saving a Threatened Resource—

and Nami G. Bnownik, ed., 1992, p131-137.
Hydraulic Engineering: Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.
Hydraulic Risk of Flood Disaster Reduction at Dams,
Shou-shan Fan, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p549554.

556.
Hydraulics of Dams from a Military Perspective, Ralph A. Wurbs, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p701-706.
Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, K. H. Frizell, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439.
Hydrologic Methods for Mitigating and Remediating Wetlands in Industrial Development, W. J. Rabe, Jr. and J. K. Virmani, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p488-493.

Hydrology, Hydraulics and CAD, Peter J.R. Buttner, CC Dec. 92, p1,7-10.

Hydroturbine Cavitation Erosion, J. L. Gordon, EY Dec. 92, p194-208.

Important Sources of Errors in Computational Hydraulics, Nosrat Maghsoudi and Daryl B. Simons, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p392-397.

Joint Network Modeling and Scale Effects in Rock, P. H. S. W. Kulatilake, Shuxin Wang and Hasan Ucpirti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p441-444.

inking Data Bases to Hydraulic Computations, Brian R. Turcotte and N. Davies Mtundu, CP Jan. 92, p63-71.

esh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p323-328.

The MIDUSS Touch, Ed Chamberland, CC June 92,

pl, 10-14.

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertainties of Sediment Transport Parameters, Carlos C. Carriaga and Larry W. Mays, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1907), 452-5311. 1992), p526-531.

Modeling Shallow Overland Flow in Surface Irrigation, B. L. Maheshwari and T. A. McMahon, IR Mar/Apr. 92.

p201-217.

Numerical Method for Finding Leaks in Pipe Networks, Ranko S. Pudar, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p809-

Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), 993.

Optimal Design of Parabolic Canals, G. V. Loganathan, IR Sept./Oct. 91, p716-735.

Optimization-Availability-Based Design of Water-Distribution Networks, M. John Cullinane, Kevin E. Lansey and Larry W. Mays, HY Mar. 92, p420-441.

Lansey and Larry W. Mays, 11 Mar. 92, ps20-441.
Physical Modeling of a High Velocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Jr. and Robert U. Castle, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p618-623.

Piezometers in Earth Dam Impervious Sections (Paper introduced by R. W. Beene and Clifford LeRoy McAnear), James L. Sherard, (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh,

ed., 1992), p324-365.

Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu A. Patel and Burton D. Sklar, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280.

Progress Report ARS/SCS Runoff Curve Number Work Group, D. E. Woodward and W. J. Gburek, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p378-382.

Riprap Stability Under Impinging Flow, James R. Leech, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p138.

and Nan U. Inwams, ed., 1992), p. 136.
Sour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Seattle Swings Again, Rita Robison, CE July 92, p46-49. Sediment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p677-

Seepage Optimization for Trapezoidal Channel, A. R. Ka-cimov, IR July/Aug. 92, p520-526.

Shock Pattern at Abrupt Wall Deflection, Markus Schwalt and Willi H. Hager, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p231-236.

Stability of Overtopped Embankment Dams, Ashok I Chugh, (Stability and Performance of Slopes and En-bankments II, Raymond B. Seed, ed. and Ross V Boulanger, ed., 1992), p414-428.

Boulanger, ed., 1992), p414-428.
Stable Channel and Environmental Design Considerations for an Urban Flood Control Project, Edward F. Sing, Daniel Pridal and Thea Lane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p464-469.
Succassful Interactions Between Hydraulic Engineering and Geomorphology in Identifying Flood Hazard Areas in the Southwestern United States, Richard H. French and Jeffrey R. Keaton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p581-586. p581-586.

TDHNET, Walter Grayman, CC Feb. 92, p1,4-5.

Texas Bridge Scour Evaluation Program, Stephen B. Olo-na, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p70-75.

and van G. Brownis, ed., 1992, p. 19-19.

A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

Tup. Directional Flow. in Embanyments, Namer Ab.

Bhowmik, ed., 1992), polya-499.
Two-Dimensional Flow in Embankments, Nazeer Ahmed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p636-641.
Uniform Aerated Chute Flow, Willi H. Hager, HY Apr. 91, p528-535.

Update: Bridge Scour, Frank Huber, CE Sept. 91, p62-63.

upulate: irridge Scour, Frank Huber, CE Sept. 91, p62-63. Vadose Zone Composite Hydraulic Conductivity, Shur Tung Chu, IR Sept./Oct. 92, p822-827. Validation of the TEXSAN Thermal-Hydraulic Analysis Program, S. P. Burns and D. E. Kiein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p799-804.

Wave-Motion Stability in Canals with Automatic Con-trollers, Simion Hancu and Paul Dan, HY Dec. 92, p1621-1638.

WSPRO Files for Slope-Area Computations, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334.

asystrocarbons

Analytical Prediction of Gasoline Thickness on the Water
Table, M. Yavuz Corapciollu, Rajasekhar Lingam and
Vern K. Haisler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p254259.

Electroosomotic Removal of Gasoline Hydrocarbons and TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

and matthew i. wants, te. stanftreb. y, poe-5.
Integrated Remediation of Soil and Groundwater, Russell
S. Dykes and Arlin C. Howles, (Environmental Engimeering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p244-249.
Predicting Fate and Effects of Hydrocarbons in the
Oceans, Richard A. Geyer, (Civil Engineering in the
Oceans V, Robert T. Hudspeth, ed., 1992), p356-369.

Ravid Dytection of Hydrocarbon. Contamination in

Rapid Detection of Hydrocarbon Contamination in Ground Water and Soil, A. M. Chrestman, G. D. Comes, S. S. Cooper and P. G. Malone, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1165-1170.

Soil Contamination Issues at Port Marine Terminals, Donald W. Rice, (Ports '92, David Torseth, ed., 1992),

p288-300.

Hydrodynamic pressure

Dynamic Effect of Sediment on Dam Hydrodynamics,
Bang-Fuh Chen, Kuo-Chyang Chang and Tin-Kan
Hung, Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), p345-348.

Stability of Overtopped Embankment Dams, Ashok K. Chugh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p414-428.

Bryarodynamic Model Validation Through Simulations of Dynamic Processes, Leif H. Slordal, Eivind A. Martinsen and Alan F. Blumberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p525-537.

Craig Swanson, ed., 1992.) p.22-537.

D Particle Tracking for the New York Bight, Raymond S. Chapman and Mark S. Dortch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.26-35.

Computation of Long-Term Three-Dimensional Hydro-dynamics of New York Bight, Keu W. Kim, David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p500.

A Computational Berthing Model for the Design of Fender Systems, John R. Headland, (Ports '92, David Torseth, ed., 1992), p480-492.

Computer Support for Water Quality Management in San Diego Bay, A. E. Bale and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p176-181.

Controlling Pulsed Incompressible Flow, Richard Ian Stessel, EY Apr. 92, pl-17.

Data Set for Verification of 3-D Free-Surface Hydrody-Data Set for Verification of 3-D Free-Surface Hydrody-namic Models, Carquinez Strait, California, P. E. Smith, R. N. Oltmann and M. R. Simpson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p430-435.
Developments of Modelling Software for Civil Engineers, J. C. M. Dijkzeul, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p56-60.
DYNLETI: Network Model for Tidal Intel Dynamics.

ed., 1992), p56-60.

DYNLET1: Network Model for Tidal Inlet Dynamics, Michael Amein and Nicholas C. Kraus, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p644-656.

Effects of Wind on Circulation in Los Angeles-Long Beach Harbors, William C. Seabergh and S. Rao Vemulakonda, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p551-63.

Efficiency of Jet Mixing of Temperature-Stratified Water, Heinz G. Stefan and Ruochuan Gu, EE May/June 92, p363-379.

An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536.

Equivalent Statistical Quadratization of Nonlinear Hydrodynamic Loads on TLPs, Ahsan Kareem and Yousun Li, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p890-905.

Experiments with a Terrain-Following Hydrodynamic Model for Cobscook Bay in the Gulf of Maine, David A. Brooks and Laurice U. Churchill, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p215-226.

Flexible Porous Breakwater, Keh-Han Wang and Xugui Ren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p224-227.

John M. Niedzwecki, ed., 1992), p224-227.
Frontal Dynamics and Circulation of the Upper Layer of a Fjordsystem with Complicated Topography, Harald Svendsen, Susanne R. Mikki and Lars G. Golmen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p252-267.
A Hydraulic Study of Venous Valve Closure, Shi-kang Wang, Yu-chen Qiu and Ned H. C. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p697-700.

Hydrodynamic and Water Quality Modeling of Lower Green Bay, David J. Mark and Barry W. Bunch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p657-668. Hydrodynamic Forces and Evolution of a Nearshore Berm at South Padre Island, Texas, James A. Aidala, Neil T. McLellan and Cheryl E. Burke, (Hydraulic Engineering, Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239. Hydrodynamics for Water Quality Models, Mark Dortch and Billy Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p145-150.

and Biniy sonnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p145-150.

Impact of Breakwater Removal on Hydrodynamics and Water Quality in Flushing Bay, New York, Frederick E. Schuepfer, Guy A. Apicella and Les Kloman. (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), p694-706.

Improved Thermal Predictions in Ce-QUAL-W2, Raymond S. Chapman and Thomas M. Cole, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p158-163.

Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-256.

Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, M. L. Spaulding, K. Jayko, T. Isaji, E. L. Anderson, E. Howlett, J. C. Swanson, D. Mendelsohn and S. Puckett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175.

Modeling of CSO Impacts in Jamaica Bay and Tributaries, John P. St. John, William M. Leo and Robert Gaffoglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p109-95.

Modeling Three-Dimensional Circulation and Sediment Transport in Lakes and Estuaries, Y Peter Sheng, D. E. Eliason and X.-J. Chen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p109-115.

Modeling Transport and Fate of Micropollutants in Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed and

p669-683.

NetCDF: A Public-Domain-Software Solution to Data-Access Problems for Numerical Modelers, Harry L. Jenter and Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p72-82.

Network Applications of the USGS Branch Model, Raymond W. Schaffranck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1159-1164.

shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1139-1164.
Numerical Methods 101—Convergence of Numerical Models, David B. Thompson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p398-403.
Numerical Model Simulation of Tidal Currents in Long Island and Block Island Sounds, L. Charles Sun, Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p513-524.

Numerical Model Verification by Prescribed Solution Forcing—A Test Case, Dick P. Dee, F. Mauricio Toro and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p416-421.

A Numerical Simulation Approach to Estimating Dispos-al Site Stability, Norman W. Scheffner, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1006-1011.

Numerical Simulation of Tidally Induced Three-Dimensional Hydrodynamics of New York Bight, K. W. Kim, N. W. Scheffner, D. J. Mark and B. H. John-son, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p466-475.

A Numerical Study of Kinematics of Nonlinear Water Waves in Three Dimensions, Hongbo Xü and Dick K. P. Yue, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p81-98.

Oceanographic Influences on Oil Spill Movement in the Arabian Gulf, S. Venkatesh and T. S. Murty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p108-113.

Parametric Study of Seismic Soil-Tank Interaction. I: Horizontal Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p783-797.

Parametric Study of Seismic Soil-Tank Interaction. II: Vertical Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p798-812.

A Predictive Model of the Currents in Cleveland Bay, Brian King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p746-758.

Preliminary Circulation Simulations in Apalachicola Bay, T. S. Wu and W. K. Jones, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keth Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p344-356.

Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p164-169.

Rapidly Varied Flow Analysis of Undular Bore, Rodney J. Sobey and Maarten W. Dingemans, WW July/Aug. 92, p417-436.

Real-Time Simulation and Visualization of 2-D Surface Water Flow, H. C. Lin, N. L. Jones and D. R. Richards, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-340.

Release Alternatives on a 3-D Salinity Simulation, Bernard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-

Review of Equations of Conservation in Curvilinear Co-ordinates, Pei-Fang Wang, EM Nov. 92, p2265-2281.

Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), pl 88-

Sensitivity of Flow and Salt Transport to Uncertainties at Open Boundaries: A 3-D Experience, Bernard B. Hsieh and Billy H. Johnson, (Estuarine and Coastal Model-ing, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p720-732.

A Simple Method to Compute Wave Loads on a TLP, Moo-Hyun Kim, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p158-172.

Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Seasonal Timescale, Eugene J. Wei, (Estuarine and Coastal Modeling, Malcolm L. Spauld-ing, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p430-440.

Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Annual Timescales, Richard A. Schmalz, Jr., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p441-452.

1992), 9441-452.
Summary of Noncohesive Sediment Transport Processes at the Bed/Water Column Interface, David H. Schoellhamer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p375-

Three-Dimensional Characteristics Model of Wind-Generated Turbulent Flow, Panayis-Fokion Matsoukis and Aristotelis Papadopolis-Dezorzis, EM Aug. 92, p.1526-1545.

p1526-1545.
Three-Dimensional Circulation Modeling of the Coastal and Ocean Environments, Keh-Han Wang, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), 9637-651.
Two-Dimensional Circulation Modeling of the Pamlico River Estuary, North Carolina, G. L. Giese and Jerad D. Bales, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p607-619.
Using a Dwe Study for Defining Diffusion in a Water.

p607-619.

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Verification of a 3-D Hydrodynamic Numerical Model, David Daniel Abraham, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p225-230.

Verification Techniques Used in Modeling Charleston.

1992), p225-230.
Verification Techniques Used in Modeling Charleston Harbor, South Carolina, Samuel B. Heltzel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p257-262.
Water-Quality Modeling for Decision Making, G. T. Orlob, WR May/June 92, p295-307.

lob, WR May/June 92, p295-307.
Wave-Current Interaction with a Large Structure, Michael Isaacson and Kwok Fai Cheung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80.
Wind Effect on Oblique Motion of Two Bodies in a Uniform Flow, Allen T. Chwang and Ching-Jer Huang, (Engineering Mechanics, Loren D. Lates, ed. and John M. Niedzwecki, ed., 1992), p353-356.

Hydroelectric power
Behavior of Thermal Wedges in Oscillating Reservoir
Flow: A Case Investigation, Vahid Alavian, Neil Sutherland and Ming Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p501-506.

Design of Pneumatic Diffuser System, Steven C. Wilhelms, Charles W. Downer and Richard E. Price, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1055-1060.

Extended Experience with a Short-Term Hydropower Scheduling Model in New England, Paul H. Kirshen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p299-304. Hydropower, Water Quality and Waste Discharge, Shoou-Yuh Chang, Shu-Liang Liaw, Steven F. Railsback and Michael J. Sale, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p380-385. p380-385.

Research/Application of System Engineering to Water Resources Systems, Dingzhong Dai, Xueren Lu, Yuan-yu Guo and Xinyi Xu, WR May/June 92, p337-349. Start-Ups, CE Sept. 92, p11.

Hydroelectric power generation
Aggregation-Disaggregation Approach to Multireservoir
Operation, Juan B. Valdés, Jenny Montbrun-Di Filippo, Kenneth M. Strzepek and Pedro J. Restrepo, WR
July/Aug. 92, p423-444.
Facilitating Technology for Electric Power Generation,
Ian Pope, (Ocean Energy Recovery: the State of the Art,
Richard J. Seymour, ed., 1992), p276-292.

Hydroturbine Cavitation Erosion, J. L. Gordon, EY Dec. 92, p194-208.

Hydroturbine Cavitation Erosion, J. L. Gordon, EY Dec. 92, p194-208.

Increasing Safety Downstream of Hydropower Facilities, Stephen E. Draper, CF Nov. 91, p239-250.

Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.

Integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, B. A. Miller, V. Alavian, M. D. Bender, D. J. Benton, P. Ostrowski, Jr., J. A. Parsly and M. C. Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p563-568.

Issues in Hydropower Modeling Using GEMSLP Algorithm, K. K. Reznicek and S. P. Simonovic, WR Jan./Feb. 92, p54-70.

Operation of Large Multireservoir Systems Using Optimal-Control Theory, Numan R. Mizyed, Jim C. Loftis and Darrell G. Fontane, WR July/Aug, 92, p371-387.

Reservoir Operating Rules for Maximum Hydropower Production, Emmanuel U. Nzewi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p543-548.

Hydroelectric powerplants

Hydroelectric powerplants

Aeration Using the Howell-Bunger Valve, D. D. Kraus and E. R. Hixson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p299-304

JOA.

Dynamic Fish Growth Modeling for Tailwater Fishery Management, Ming Shiao, Gary Hauser, Gary Chapman, Bruce Yeager, Tom McDonough and Jim Ruane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 136-1141.

Guidelines for Rehabilitation of Civil Works of Hydro-

Guidelines for Rehabilitation of Civil Works of Hydroelectric Plants, Format: unbound, three-hole punched, Task Committee for the Preparation of Guidelines for Rehabilitation of Civil Works of Hydroelectric Plants, Hydropower Committee, American Society of Civil Engineers, (Ashok K. Rajpal, chmn.), 1992, 0-87262-889-2, 247pp.
Increasing Safety Downstream of Hydropower Facilities, Stephen E. Draper, CF Nov. 91, p.239-250.

Modified QUAL2E Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, Rex A. Tolman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p194-199.

Nonlinear Stability of Differential Surge Chambers, Xiao-Liang Yang and Chen-Shan Kung, HY Nov. 92, p1526-1539.

p1526-1539.

Numerical Prediction of Aeration in Hydroturbine Draft Tubes, M. Naghash and C. Bohac, (Hydratulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p293-298.

Optimization of Real-Time Hydrothermal System Operation, William W.-G. Yeh, Leonard Becker, Shi-Qian Hua, De-Pu Wen and Jian-Min Liu, WR Nov./Dec. 92, p636-653.

Overview of AWADE.

p030-033. Overview of AWARE: A Software Tool for Balancing Power and Nonpower Values in Water Resource Plan-ning, Jennie S. Rice, (Risk-Based Decision Making in Water Resources V, Yacov Y, Hairmes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p108-

116.
Rock Creek—Cresta Sediment Management Plan, Larry L. Harrison, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p102-107.
Slope Stabilization at the Forks of Butte Project, Stephen J. Klein and David K. Hughes, (Stability and Performance of Slopes and Embancments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p005-922.
Water-Level Control in Hydropower Plants, Oscar F. Jiménez and M. Hanif Chaudhry, EY Dec. 92, p180-193.

Hydrogen

Analysis of Two Lunar Oxygen Production Processes,
Laura Hernandez and H. A. Franklin, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,

Hydrogen Generation During Treatment of Simulated High-Level Radioactive Waste with Formic Acid, J. A. Ritter, J. R. Zamecnik and C. W. Hsu, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p549-556.

In-situ Release of Solar Wind Gases from Lunar Soil, Layton J. Wittenberg, (Engineering: Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p537-546.

Lunar Oxygen—The Reduction of Glass by Hydrogen, Carlton C. Allen, David S. McKay and Richard V. Morris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p629-640.

Physical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SY-101, Rudolph T. Allemann, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p610-614.

grant Committee, 1992), p610-614.

Recent Developments of the Carbotek Process for Production of Lunar Oxygen, Christian W. Knudsen, Michael A. Gibson, David J. Brueneman, Seishi Suzuki, Tetsuji Yoshida and Hiroshi Kanamori, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p597-605.

Robotic On-Orbit Fueling of SEI Vehicles, Margaret M. Clarke, David E. Haines and A. J. Mauceri, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1423-1433.

## Hydrogen peroxide

Treatment of Contaminated Groundwater Using Chemi-cal Oxidation, Mark E. Zappi, Beth C. Fleming and M. John Cullinane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1184-1189.

# Hydrogen sulfide

Biochemical Control of Sulfide Production in Wastewater Collection Systems, Ricardo B. Jacquez and Hamdy H. El-Rayes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p327-333.

7-Day 10-Yr Low Flow Relationships for Ungauged Sites in Central Italy, Piergiorgio Manciola and Stefano Casadei, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p250-256.

Achievements Within the International INTRAVAL Pro-ject, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1414-1420.

Development of the San Fernando Basin Groundwater Flow Model, Shih-Huang Chieh, Kelli A. Shuter and Melin M. Ozbilgin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p248-253.

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, John L. Smoot, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p345-351.

Prediction and Sensitivity of Recharges Due to Rainfall, Sampath K. R. Danda and Lakshmi N. Reddi, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402.

Review of Ground-Water Quality Monitoring Network Design, Hugo A. Loaiciga, Randall J. Charbeneau, Lorne G. Everett, Graham E. Fogg, Benjamin F. Hobbs and Shahrokh Rouhani, HY Jan. 92, pl 1-37.

anu onantona Kounani, HY Jan. 92, pll-37.
Winter Nutrient Losses to Groundwater Associated with Various Tillage Manure Systems, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p567-572.

Hydrographic surveys

An Intrusive Fluid Mud Surveying System, Allen Teeter,
Glynn Banks, Michael Alexander and Andrew Salkield,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p1012-1017.

Assessing Uncertainty of Unit Hydrograph, Yeou-Koung Tung and Bing Zhao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p543-

Darcy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, IR Jan./Feb. 92, p104-112.

and Gary A. Wieman, IR Jan/Feb. 92, p104-112.

Dracy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p747-752.

Impact of Flow Variability on Error in Estimation of Tributary Mass Loads, Stephen D. Preston, Victor J. Bierman, Jr. and Stephen E. Silliman, EE May/June 92, p402-419.

Loop Rating Curves from Goodwin Creek, Roger A. Kuhnle and Andrew J. Bowie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p741-746.

Numerical Solution of Muskingum Equation, Mohammad Akram Gill, HY May 92, p804-809.

mad Akram Gill, HY May 92, p804-809.
Physically Based Flood Features and Frequencies, Hsieh Wen Shen, Gregory John Koch and Jayantha T. B. Obeysekera, HY Apr. 90, p494-514.
Simplified Design of Multi-Stage Outfalls for Urban Detention Basins, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p861-866.
Unit Hydrograph Derivation Using Geographic Information System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12.

Hydrologic aspects
Design-Basis Flood for Rehabilitation of Existing Dams,
Anand Prakash, HY Feb. 92, p291-305.

Anand Prakash, HY Feb. 92, p291-305.
Hydrologic Considerations in Mined Land Reclamation,
Patrick T. Tyrrell and Martin W. Stearns, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Eagman, ed., 1992), p383-388.
Hydrologic Investigation of the April, 1983 Flooding in
New Orleans, Louisiana, Michael A. Ports, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammat
Karamoux, ed., 1992), p260-267.

Hydrological Aspects of Droughts, A. R. Rao and A. Al-Wagdani, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p334-340.

Pol-scale Field Experiment of Surface Hydrologic Processes with EOS Implications, Charles A. Laymon, Emir J. Macari and Nicholas C. Costes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2082-2093.

Hydrologic models

Accumulation Effects of Stormwater Management Deten-tion Basins, Robert G. Traver and Ronald A. Chadder-ton, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p925-930.

ADICPR Version 1.40, Bernard Golding, CC Jan. 92, pl,4-6.

Generalized Least Squares Analyses for Hydrologic Re-gionalization, Jery R. Stedinger and Gary D. Tasker, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1932), p7-12.

Hydrologic Model for Drained Forest Watershed, E. J. McCarthy, J. W. Flewelling and R. W. Skaggs, IR Mar/Apr. 92, p242-255.

Hydrologic Parameter Estimation Using Geographic Information System, Nageshwar R. Bhaskar, Wesley P. James and Ravikumar S. Devulapalli, WR Sept./Oct. 92, p492-512.

92, p492-512. Linking GIS with Hydrologic Modeling, Barry Evans, Jeffrey Crimm, Larry Thornton and Paul Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Fed Engman, ed., 1992), 9499-504. Modeling Stormwater Basin Effects, Robert G. Traver and Ronald A. Chadderton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), P855-860.

Nonparametric Framework for Long-Range Streamflow Forecasting, J. A. Smith, G. N. Day and M. D. Kane, WR Jan./Feb. 92, p82-92.

Precision of Evapotranspiration Estimates Using Neutron Probe, Osmar A. Carrijo and Richard H. Cuenca, IR Nov./Dec. 92, p943-953.

IR Nov./Dec. 92, p943-953.
Regional Flow-Duration Curves for Ungauged Sites in Massachusetts, Neil Fennessey and Richard M. Vogel, WR July/Aug. 90, p530-549.
Simulation of Reservoir Operation Using Smart Reservoirs, Jon S. Behrens, (Computing in Civil Engineering and Geographic Information Systems Symposium, p606-613.
Codono, ed. and Jeff R. Wright, ed., 1992), p606-613.

Soil Moisture and Runoff—Another Look, Joseph A. Van Mullem, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p366-371.

Stochastic Simulation of Climate Input for Water Supply Forecasting, Roy W. Koch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p557-562.

Topographic Effects on Stormflow Acidity, David Wolock, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p878-883.

Hydrology

Adaptive Parameter Estimation for Multisite Hydrologic Forecasting, Haitham M. Awwad and Juan B. Valdes, HY Sept. 92, p1201-1221.

Analysis of Evaporative Flux Data for Various Climates, Gabriel G. Katul, Richard H. Cuenca, Philippe Grebet, James L. Wright and William O. Pruitt, IR July/Aug. 92, p601-618.

92, p601-618.

Applications of Remote Sensing to Drainage, Sun F. Shih, Edwin T. Engman and Christopher Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p547-552.

Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.

Automated Delineation of Catchment Area Boundaries with TINs, Norman L. Jones and James Nelson, (Hydralic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p347-352.

BRASS Modeling of Loiza Reservoir, Puerto Rico, for

G. Bhowmik, ed., 1992), p347-332.

BRASS Modeling of Loiza Reservoir, Puerto Rico, for Sediment Management Operations, Gregory L. Morris, Raul Colon, Robert Laura and G. T. Anderson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p837-842.

Characteristics of U.S. Geological Survey Discharge Measurements for Water Year 1990, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p452-457.

Computer Modeling Responsibilities for Municipalities.

Computer Modeling Responsibilities for Municipalities, Michael L. Deas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p338-343.

343.

Computer-Aided Characterization of Wellfield-Testing Results in Basalts, J. A. Paschis, J. R. Kunkel and T. D. Steele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p475-480.

Conceptual Basis of Seasonal Streamflow Time Series Models, Jose D. Salas and J. T. B. Obeysekera, HY Aug. 92, p1186-1194.

Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p355-

Jennings, ed. and Nani G. Bhowmik, ed., 1992), p355-362.

Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, C. S. Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Fligh Level Radioactive Waste Management Program Committee, 1992), p263-271.

Distribution of Wetland Hydrologic Parameters, Misganaw Demissie and Abdul Khan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p470-475.

Effects of Drainage and Water-Management Practices on Hydrology, K. D. Konyha, R. W. Skaggs and J. W. Gilliam, IR Sept./Oct. 92, p807-819.

Efficient Sizing of Storm Water Treatment Ponds, Thomas R. Sear and Brenda van Ravenswaay, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irripation)

Karamouz, ed., 1992), p780-785. Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p25. Environmental Impacts of Agricultural Drainage, R. W. Skaggs, M. A. Breve and J. W. Gilliam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p19-24. Evaluating the Hydrologic Functions of Watlands Abiolic Payling and Payling and

Evaluating the Hydrologic Functions of Wetlands, Abiola A. Akanbi and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487.

Bnowmik, ed., 1992), 9482-467.
A Frequency Surface for Rainfall Intensity and Duration, G. V. Loganathan and M. A. Parkin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p386-390.

HEC-2 Water Surface Profiles Program, Verson Bonner.

Karamouz, ed., 1992), p386-390.

HEC-2 Water Surface Profiles Program, Vernon Bonner, 
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. 
and Nani G. Bhowmik, ed., 1992), p866-871.

Hillsboro Basin Surface Water Management Model, 
David P. Preusch, Jayantha Obeysekera, John M. 
Crouse and Kendrick Logsdon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad 
Karamouz, ed., 1992), p810-816.

Hydraulic Engineering Saving a Threatened Resource—

Hydraulic Engineering Saving a Threatened Resource—

Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.

G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.
Hydraulics of Dams from a Military Perspective, Ralph A. Wurbs, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p701-706.
Hydrologic Assessment for Riparian Restoration Projects, Douglas Hamilton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p624-629.
Hydrologic Methods, for Miligating and Remediating

Hydrologic Methods for Mitigating and Remediating Wetlands in Industrial Development, W. J. Rabe, Jr. and J. K. Virmani, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p488-493.

Hydrologic Model for Drained Forest Watershed, E. J. McCarthy, J. W. Flewelling and R. W. Skaggs, IR Mar./Apr. 92, p242-255.

Hydrologic Parameter Estimation Using Geographic In-formation System, Nageshwar R. Bhaskar, Wesley P. James and Ravikumar S. Devulapalli, WR Sept./Oct. 92, p492-512.

Hydrology, Hydraulics and CAD, Peter J.R. Buttner, CC Dec. 92, p1,7-10.

Dec. 74, p1, 1-10.

The Impact of Thermal Loading on Repository Performance at Yucca Mountain, Thomas A. Buscheck and John J. Nitao, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1003-1017.

Importance of the Tropical Rainfall Measuring Mission (TRMM) Satellite to Hydrological Investigations, Joanne Simpson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p523-528.

Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p523-528. Introduction to Remote Sensing for Irrigation and Drainage, Edwin T. Engman and Richard H. Cuenca, (Irrigation and Drainage Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p529-534. Investigation of Curve Number Procedure, Allen T. Hjelmfelt, Jr., HY June 91, p725-737.

Is An Instream Flow Need a Beneficial Use? Robert T. Milhous, (Water Resource» Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p368-373.

Land Use and Imperviousness Information Acquisition, Ming T. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p363-368.

Landfill Storm Water Runoff Control, Paul Makowski and Daniel Pazdersky, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p423-428.

Model and Calculations for Net Infiltration, Stuart W. Childs and Austin Long, (High Level Radioactive Waste Management Program Committee, 1992), p1633-1642.

New Look at Regional Flood-Frequency Relations for Arid Lands, Hjalmar W. Hjalmarson and Blakemore E. Thomas, HY June 92, p868-886.

An Overview of the Yucca Mountain Global/Regional Climate Modeling Program, Robert P. Sandoval, Yugal K. Behl and Starley L. Thompson, (High Level Radioactive Waste Management Program Committee, 1992), p118-1195.

Paleohydrologic Implications of the Stable Isotopic Com-

active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1188-1195.

Paleohydrologic Implications of the Stable Isotopic Composition of Secondary Calcite Within the Tertiary Volcanic Rocks of Yucca Mountain, Nevada, Joseph F. Whelan and John S. Stuckless, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581.

Performance Assessment for a High-Level Waste Repository at Yucca Mountain, R. Shaw, R. F. Williams, J. C. Stepp and R. McGuire, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p869-873.

Physical Processes and Effects of Magmatism in the Yucca Mountain Region, Greg A. Valentine, Bruce M. Crowe and Frank V. Perry, (High Level Radioactive Waste Management Program Committee, 1992), p2014-2024.

Plot-scale Field Experiment of Surface Hydrologic Processes with EOS Implications, Charles A. Laymon, Emir J. Macari and Nicholas C. Costes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2082-2093.

Progress Report ARS/SCS Runoff Curve Number Work Groun, D. F. Woodward and W. J. Charles.

ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2082-2093.

Progress Report ARS/SCS Runoff Curve Number Work Group, D. E. Woodward and W. J. Gburek, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p378-382.

Rainfall-Runoff Relations for the Puget Sound Area, R. S. Dinicola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p890-894.

Retention Parameter Estimates for Curve Number Runoff Procedure, W. Carlisle Mills, Adrian W. Thomas, Anthony L. Dillard and Willard M. Snyder, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p372-377.

SCS Water Surface Profile Model—WSP2, William H. Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p839-864.

Short-Duration Rainfalls in Sicily, Giovanni B. Ferreri and Vito Ferro, HY Mar. 90, p430-437.

Soil Moisture and Runoff—Another Look, Joseph A. Van Mullem, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p366-371.

Status of ASCE Handbook of Hydrology, Thomas P. Wootton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p348-451.

Summary of Noncohesive Sediment Transport Processes at the Bed/Water Column Interface, David H. Schoellhamer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshail Jennings, ed. and Nani G. Bhowmik, ed., 1992, p375-

Surface and Subsurface Drainage of Metropolitan City in Arid Zone, Achi M. Ishaq, IR Jan/Feb. 92, p19-35. Systems Analysis Applications at Hydrologic Engineering Center, Arlen D. Feldman, WR May/June 92, p249-

261. Task Committee Report on Urban Hydrology Chapter, David F. Kibler, A. Osman Akan, Christopher B. Burke, Mark W. Gildden, Gert Aron, Richard H. McCuen and Andrew J. Reese, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 10021-272-2738 1992), p725-728

Three Dimensional Modeling of Watershed Hydrology, M. N. Saquib and M. L. Kavvas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p391-396.

279

Three Dimensional Visualization in Support of Yucca Mountain Site Characterization Activities, David W. Brickey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 9438-461.

Variations of Hydrological Parameters of Tuff and Soil, J. S. Y. Wang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p727-731.

Visualization of Groundwater Contaminant Parameters, Gregory D. Comes, James Warner and S. Paul Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1177.

Water Quality and Hydrologic Characteristics of a Wet Detention Pond, Betty Rushton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p878-883.

Karamouz, ed., 1992), p878-883.

Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p718-783.

Water-Balance Model of Two Conservancies in Guyana, J. de Beer and L. Bacchus, IR July/Aug. 92, p513-519.

Watershed Models for Resources Management Decisions, Alan M. Lumb, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p884-889.

Hydrometeorology
Integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, B. A. Miller, V. Alavian, M. D. Bender, D. J. Benton, P. Ostrowski, Jr., J. A. Parsly and M. C. Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p563-568.

Bhowmis, ed., 1727, p. Hydroplaning
Experiments with Wind Effects on Pavement Runoff, Joseph R. Reed, David F. Kibler and George Krallis, (Hydraulic Engineering, Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.

Hydrostatic pressure
Corrosion Fatigue of Deepwater Offshore Materials, Gordon F. Fowkes and Harris L. Marcus, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.

po94-703. Estimating Damage and its Influence on Fracture Toughness, J. F. Labuz, L. Biolzi and C. N. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p523-526.
Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

Postbuckling Behavior of Stiffened Composite Shell Panels, S. Sridharan, A. Kasagi and M. Zeggane, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p648-651.

Wire Recovery Length in Suspension Bridge Cable, Mo-hammed Raoof and Yu Ping Huang, ST Dec. 92, p3255-3267.

Hyperbolic parabolic shells Hypar Shell on Pasternak Foundation, D. N. Paliwal, S. N. Sinha and A. Ahmad, EM July 92, p1303-1316.

Hypoplasticity
Hypoplastic Model for Sands, J. P. Bardet, EM Sept. 90, p1973-1994.

Hysteresis

Axial and Free-Bending Analysis of Spiral Strands Made Simple, Mohammed Raoof and Yu Ping Huang, EM Dec. 92, p2335-2351.

nergy Dissipation in Determinate Steel Beams, Helen M. Goldsworthy and Len K. Stevens, ST Jan. 92, pl-Energy Dis

Energy Dissipation in Indeterminate Steel Beams, Hele M. Goldsworthy and Len K. Stevens, ST Jan. 92, p18-33.

Incremental Collapse of Structures with Constant Plus Cyclically Varying Loads, Sidney A. Guralnick, Thom-as Erber, Osama Soudan and Jixing He, ST June 91, p1815-1833.

Inelastic Response of Variable Stiffness Members under Cyclic Loading, Demeter G. Fertis and Chin T. Lee, EM July 92, p1406-1422.

Hysteresis models
Hysteretic Behavior of Anchorage Slip in R/C Members,
Murat Saatcioglu, Jaber M. Alsiwat and Guney Ozcebe,
ST Sept. 92, p2439-2458.

Hysteretic systems
Aseismic Hybrid Control of Nonlinear and Hysteretic
Structures I, J. N. Yang, Z. Li, A. Danielians and S. C.
Liu, EM July 92, p1423-1440.
Aseismic Hybrid Control of Nonlinear and Hysteretic
Structures II, J. N. Yang, Z. Li, A. Danielians and S. C.
Liu, EM July 92, p1441-1456.

Control of Hysteretic System Using Velocity and Acceleration Feedbacks, J. N. Yang, Z. Li and S. C. Liu, EM Nov. 92, p2227-2245.

Stochastic Dynamics of Hysteretic Systems, Lucia Faravelli and Paolo Venini, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p53-56.

Truncation of Infinite Hierarchy for Hysteretic Systems, George Tsiatas and Sau-Lon James Hu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p416-419.

I seams for Shear-Lag Effect of T-, and I-, and Box Beams, Qi-gen Song and Alexander C. Scordelis, ST May 90, p. 1306-1318.
Straight, Single-Tapered Composite I-Beams of Orthotropic Materials, Robert J. Leichti and Chai H. Yoo, MT Nov. 92, p399-414.

Constitutive Model for Ice, H. A. Khoo and T. M. Hru-dey, EM Feb. 92, p259-279.

Estimating Thaw-Strain Settlement of Frozen Fill, G. Scott Crowther, CR Dec. 92, p152-159.

Numerical Integration of Transient Creep Constitutive Equations for Polycrystalline Ice, S. Shyam Sunder, Alex A. Elvin and S. Nanthikesan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), p429-432.

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p429-432.
 Pressure of Crushed Ice as Mohr-Coulomb Material Against Flat, Axisymmetric Indentor, Dat Duthinh, CR Dec. 92, p139-151.
 Size, Temperature and Rate Effects on the Fracture Toughness of Saline Ice, Samuel J. DeFranco and John P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p264-267.

ice control

e control
costion Support System for Multiobjective Service
Route Design, Jin-Yuan Wang and Jeff R. Wright,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p9-16. Decision

Computation of Flow in Ice-Covered Dune-Bed Chan-nels, J. Y. Yoon, V. C. Patel and R. Ettema, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p385-388.

Coupled Vertical and Horizontal Galloping, Kathleen F. Jones, EM Jan. 92, p92-107.

Microorganism Survival in Ice-Covered Marine Environ-ment, S. J. Stanley, D. W. Smith and G. D. Milne, CR June 92, p58-72.

Oil Under Ice: Buoyancy Viscous Spreading, Sujeeva A. Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p102-107.

Ice Loads on Vertical Bridge Pier at Two Different Model Scales, F. T. Christensen and P. Klinting, CR Sept. 92, p93-110.

Sylvan Beach Pier Rehabilitation Study, Peter W. Soltys, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662.

Ice Loads on Vertical Bridge Pier at Two Different Model Scales, F. T. Christensen and P. Klinting, CR Sept. 92, p93-110.

A Discussion of the Numerical Modeling of Sea Ice Ridg-ing, Mark A. Hopkins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p888-891.

A Discussion of the Numerical Modeling of Sea Ice Ridging, Mark A. Hopkins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p888-891.

Idabo

Waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing Plant, Krishna Vinjamuri, Swami V. Raman, Dieter A. Knecht and James D. Herzog, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1261-1271.

JOSEPHICATION

Automated Identification of Construction Equipment
Using Acoustical Measurements, H. Randolph Thomas, Gary R. Smith and J. G. Orlowsky, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p492-499.

Crop Classification and Area Estimation Using Airborne Multispectral Video/Radiometer Remote Sensing, Rashid H. Ahmed and Christopher M. U. Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p323-

Hydrological Aspects of Droughts, A. R. Rao and A. Al-Wagdani, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ened Resource—In S ed., 1992), p334-340.

Identification of Soil Properties from Foundation Impedance Functions, J. E. Luco and H. L. Wong, GT May 92, p780-795.

Modal and Wave Load Identification by ARMA Calibra-tion, Jakob Laigaard Jensen, Poul Henning Kirkegaard and Rune Brincker, EM June 92, p1268-1273.

Modal Identification Algorithm with Unmeasured Input, C. F. Cremona and J. A. Brandon, AS Oct. 92, p442-

Recorded Seismic Response of Pacific Park Plaza. II: Sys-tem Identification, E. Şafak and M. Çelebi, ST June 92, p1566-1589.

Testing Photoelectric Sensor System to Classify Vehicles, J. L. Gattis and Clyde E. Lee, TE May/June 92, p457-

Mandated Public Participation in Siting of Hazardous and Conventional Waste Facilities: The Illinois Experience, Rabel J. Burdge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1909-1916.

Performance Evaluation of Lake Shelbyville by Stochas-tic Dynamic Programming, Han-Lin Lee, Jon C. Lieb-man and E. Downey Brill, Jr., WR Mar/Apr. 92, p183-204.

Trends in Streamflow Due to Wetland Drainage, Abdul Khan and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p476-481.

Turning on the Watenander Death F. Ed.

Turning on the Waterworks, Donald E. Eckmann, CE Aug. 92, p48-51.

## age analysis

Automated Identification of Compression-Induced Cracking in Cement Paste, David Darwin, Kirk W. Ketcham, Francisco A. Romero and Jeffrey L. Martin, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497.

Bar Codes and Data Integration in Construction, George Stukhart, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p484-491.

Concrete Surface Characterization Using Optical Metrology, Nora C. Sassenfeld and Michelle M. Crull, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p.206-

Construction Applications of Vision Systems, Gary R. Smith, H. Randolph Thomas and William Gleba, (Computing In Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p476-483.

Crop Classification and Area Estimation Using Airborne Multispectral Video/Radiometer Remote Sensing, Rashid H. Ahmed and Christopher M. U. Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p323-

Digital Imaging Concepts and Applications in Pavement Management, Stephen G. Ritchie, TE May/June 90, p287-298.

A feasibility study for a Concrete Core Tomographer, A. M. Abdel-Ghaffar, R. M. Leahy, S. F. Masri and C. E. Synolakis, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p37-48.

Image-Processing Techniques Applied to Road Problems, M. R. Wigan, TE Jan./Feb. 92, p62-83.

Irrigation and Drainage System As-Built Map Prepara-tion Using Satellite Digital Imagery and a GIS, Christo-pher M. U. Neale and Lymann S. Willardson, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p311-316.

Real-Time Integrated Computer-Aided Instruction, Jorge A. Vanegas, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p81-88.

Solotio, et. and Self R. Wight, et., 1922, porsolo SALSA: A Lunar Submillimeter-Wavelength Array, M. J. Mahoney and K. A. Marsh, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1902-1912.

Stute, ed. and Russell J. Miller, ed., 1992), p1902-1912.
Testing Pavement Image Processing Systems: An Engineering Approach, Matthew O. Ward, Tahar El-Korchi, Norman Wittels and Michael A. Gennert, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p41-62.

Use of Machine Vision in Bedform Studies, Peter A. Mantz and Wenxue Li, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992).

Use of X-Ray Computed Tomography in the Study of Marine Sediments, Thomas H. Orsi, Aubrey L. Anderson, John N. Leonard, William R. Bryant and Carl M. Edwards, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p968-982.

Vehicle Classification Using Infrared Image Analysis, Yean-Jye Lu, Yuen-Hung Hsu and Xavier Maldague, TE Mar./Apr. 92, p223-240.

Versatile Imaging System Assesses Hazwaste Sites, CE Oct. 92, p15.

Characterization of Granular Material Composite Struc-tures Using Computerized Tomography, Xiaogong Lee, William C. Dass and Charles W. Manzione, Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p268-271.

Flow Visualization Studies in the Novacor Left Ventricu-lar Assist System, Harvey S. Borovetz, Frank Shaffer, Richard Schaub, Laura Lund and John Woodard, (En-gineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p713-716.

Lagrangian Transport Simulation Using Video Images to Store and Retrieve Parameters, Poojitha D. Yapa and Jay B. Perry, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p13-25.

Impact
Access Control to Projects Via Raised Islands, Justin F. Farmer, (Sile Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p77-81.

Adhesives and Structural Plastics, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571.

Analyzing Fast-Food Drive-Up Window Site Impacts, J. L. Gattis, N. Zaman, G. W. Tauxe and R. S. Marshment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20.

The Application and Use of Impact Fees: Legal Issues, Charles L. Siemon, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p238-243.

Are Existing Traffic Methodologies Realistic? Nelson B. Nuckles, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p211-216.

Arizona's Uniform Traffic Impact Procedures, Peter M. Lima and Eric Kaiivoda, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p94-98.

ssessing the Potential of E-Mail for Engineers: Case Study, F. Safayeni, A. Yu, L. Purdy and E. Lee, ME Oct. 92, p346-361.

Oct. 92, p346-361.

Circulation Issues and Impacts—Corridor Redevelopment Santa Ana, CA—A Case Study, T. C. Sutaria and Abi Mogharabi, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p223-227.

Colgate Palmolive Transportation Impact Case Study, Martin J. Wells and Jay S. Bockisch, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p154-158.

Commuter Infiltration, The Unaddressed Issue, Thomas J. Boyd and T. C. Sutaria, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p67-71.

Comparison of Delay and ICU Analyses—Case Study, Cathy Higley and Venu Sarakki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paas-well, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p21-25.

1992), p21-25.
Computerized Transportation Planning Models for Site Impact Analysis: Precision or Complexity? Edward A. Mierzejewski and Timothy Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p128-132.
Defining Traffic Impacts of Redevelopment, Peter M. Zabierek, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p195-199.
Design of Bridge Pier Pile Foundations for Ship Impact, Bogdan O. Kuzmanovic and Manuel R. Sanchez, ST Aug. 92, p2151-2167.
Development Impact Assessment with Transportation

Aug. 92, p2151-2167.
Development Impact Assessment with Transportation Models, John Loper and Robert C. Hazlett, Jr., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p233-237.
The Dialogue of Players on the Development Stage, Barbara Barnow, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p200-204.
Energy Dissipation Characteristics of Rubber Cylinders, Dean L. Sicking, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p139-142.

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Evaluation of Impact Factors for Horizontally Curved Steel Box Bridges, D. R. Schelling, N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221.

M. A. Sahin, ST Nov. 92, p3203-3221.
The Foundation for a Successful Traffic Impact Analysis, Jacob Wattenberg, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p11-15.
Frictional Aspect of Rocking-Sliding of a Rigid Block with Surface Impact, Majid Shekarian, Joel P. Comt and Pol D. Spanos, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-331.

Lutes, ed. and John M. Nieuzwecki, ed., 1992.), p5.28-331.

A Guideline for Determining Minimum Threshold Requiring Traffic Impact Studies, Anthony A. Saka, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992.), p6-10.

Hotel-Casino Trip Generation Analysis Using GIS, Reginald R. Souleyrette, Shashi K. Sathisan and Emelinda M. Parentela, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992.), p52-56.

ICU—A Method of Analyzing Signalized Intersections, Weston S. Pringle and Robert W. Crommelin, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p26-31.

Impact Analysis of Continuous Multigirder Bridges due to Moving Vehicles, Dongzhou Huang, Ton-Lo Wang and Mohsen Shahawy, ST Dec. 92, p3427-3443.

Major Public Transportation Investments as "Develop-

and Mohsen Shahawy, ST Dec. 92, p.3427-3443.
Major Public Transportation Investments as "Development Projects": Old Colony Railroad, Mary P.
McShane, Site Impact Traffic Assessment: Problems
and Solutions, Robert E. Paaswell, ed., Nagui
Rouphail, ed. and T. C. Sutaria, ed., 1992), p138-142.
Modifications to Coal Pier 6 Made Necessary by a Deeper
Channel, Zolan Prucz, Barney T. Martin and Jerry L.
Richstein, (Ports '92, David Torseth, ed., 1992), p164-

Multivariable Analysis Using Isoparametric Finite Elements, Ping Wang and William K. Rule, EM Aug. 92, p1730-1737.

Network Model Analysis of Traffic Patterns Resulting from a Proposed Regional Mall, Stephen Lawe, Norman Marshall and Peter Ryner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), and 12 C. Sutaria, ed., 1992).

ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p89-93.

Nonlinear Shoaling and Impact of Waves on Coastal Structures, S. T. Grilli, M. A. Losada, F. Martin and I. A. Svendsen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82.

Palm Beach County Traffic Impact Analysis—A Prototype, Joseph B. Pollock, Jr. and Jacob Wattenberg, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p104-108.

The Compact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p133-137.

Site Impact Analysis Using the Tranplan Computer Model, Robert B. Hearn and L. P. Ledet, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p82-83.

Site Traffic Impact Analysis Process: The Developer's Perspective, Kenneth O. Voorhies, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p205-210.

Traffic Data Collection: What Really Needs to be Done?

A. S. Nargaimha Murthy. (Site Impact Traffic Assessment)

1992), p205-210.

Traffic Data Collection: What Really Needs to be Done?

A. S. Narasimha Murthy, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p1-5.

Traffic Impact Analysis Standardization—The Orange County, California Experience, Steve Hogan, Jerry Ingram and Kari Rigoni, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p99-103.

ROUDHAIL, ed. and T. C. Sutaria, ed., 1992), p99-103.
Traffic Impact Assessment for Snow Disposal Facilities—Extended Abstract, John P. Braaksma, Ian Lockwood and Juan Salimas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p175-179.

Traffic Impact Fees in Schaumburg, Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p170-174. Traffic Impact Studies for Marriott Corporation International Headquarters, S. Sabanayagam and Edward Y. Papazian, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p148-153. Traffic Impact Studies—Current Practices from Cities Perspective, Daniel B. Rathbone, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p109-113. The Traffic Impact Study and Traffic Impact Fees, Timothy T. Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p228-232. Traffic Impact Study for a Regional Shopping Center at a Basque City. A European View, Mikel Murga, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p217-222.
Uniform Traffic Impact Assessment Studies—A Case History of Riverside County, California, Lawrence A. Toerper, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p114-117.
The Use of Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p114-117.
The Use of Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p114-117.
The Use of Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p114-117.
The Use of Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p114-117.
The Use of Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p114-117.
The Use of Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p114-117.
Using Traffic Network Models to Assessment: Problems and Solution

wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, pt/751-1771.

Impact forces
Collisional Restitution Dependence on Viscosity, Jan
Lundberg and Hayley H. Shen, EM May 92, p979-989.
Impact Craters on Cosmic Dust: Do Damage to the
Spacecraft, Hanchang Peng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992), p969974.

974, Mechanical Response of Cellular Materials Used in Waste Shipping Containers, A. K. Maji, S. Donald and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p308-

Nonlinear Impact and Chaotic Response of Slender Rocking Objects, Solomon C. S. Yim and Huan Lin, EM Sept. 91, p2079-2100.

Numerical and Experimental Studies of Vibration of Impact Damaged SMC Composite Plates, Shive K. Charturvedi and Pay-Jye Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 2000. Loren D. Lutes, 6 1992), p1063-1066

1992), p1063-1066.

Transient Analysis of Flexible Space Structures, D. L. Rice and E. C. Ting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p827-838.

Unified Approach to Ground Improvement by Heavy Tamping, Kwang Wei Lo, Peng Lee Ooi and Seng-Lip Lee, GT Mar. 90, p514-527.

Impact loads
The Analysis Related to the Impact of Composite Panels, Ronald Perry, Anthony Palazotto and Raghbor Sandhu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1286-1296.

Constitutive Modeling and Simulation of Energy Absorbing Polyurethane Foam Under Impact Loading, James A. Sherwood and Colin C. Frost, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158.

Hypervelocity Impact Penetration Phenomena in Aluminum Space Structures, William P. Schonberg, AS July 90, p173-185.

restressed-Concrete Railway-Bridge Live-Load Strains, John F. Muller and Peter F. Dux, ST Feb. 92, p359-

376.
 Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079.
 A Spacer Grid Hysteretic Model for the Structural Analysis of Spent Fuel Assemblies Under Impact: SAND91-2528C, TTC-1114, Peter R. Barrett, I. Kurkchubasche and Kevin D. Seager, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2249-2254.

Impact tests
Flexibility by Multireference Impact Testing for Bridge
Diagnostics, Madhwesh Raghavendrachar and Ahmet
E. Aktan, ST Aug. 92, p2186-2203.
Hypervelocity Impact Penetration Phenomena in Aluminum Space Structures, William P. Schonberg, AS July
90, p173-185.

70, pl.13-183.

Method for Relating Impacts with Yielding and Unyielding Targets, D. J. Ammerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2255-2259.

Impedance Interaction Between Soil and a Rigid Foundation in a Layered Medium: A New Analytical Approach, R. C. Zhang, Y. Yong and J. Yu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p584-587.
Rocking Impedance of Embedded Strip Foundations in Layered Soil, A. Bharadwaj and S. Ahmad, GT May 92, p796-813.

npellers

An Expert System for Impeller Mechanical Design and Analysis, Wen Jeng Chen and Hong-Tsung Lin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p936-939.

Imperfections

Imperfections
Buckling of Pressurized Axisymmetrically Imperfect Cylinders Under Axial Loads, Jin-Guang Teng and J. Michael Rotter, EM Feb. 92, p229-247.

Dynamic Elastic-Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. 92, p2005-2016.

74, p.2003-2016.
Effect of Imperfections on Lattice Shells, Nicholas F.
Morris, ST June 91, p1796-1814.
Force Deformation Equations for Initially Curved Laterally Loaded Beam Columns, R. E. McConnel, EM July 92, p1287-1302.

y2, p128'-1302.
 Geometrical Imperfections on Inelastic Frame Behavior, Eric M. Lui, ST May 92, p1408-1415.
 Study on Maximum Strength of Cold-Formed Steel Col-umns, C. C. Weng and C. P. Lin, ST Jan. 92, p128-146.
 Tolerance Limits for Geometric Imperfections in Hyper-bolic Cooling Towers, A. Alexandridis and N. J. Gard-ner, ST Aug. 92, p2082-2100.

ner, S1 Aug. 92, p.2082-2100.

Impervious membranes

Concrete-Faced RCC Dams, Ronnie M. Lemons, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p.308-322.

A Current Review of Experience with Asphaltic Concrete Impervious Membranes on the Upstream Slope of Earth and Rockfill Dams, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p.10-29.

Rockfill Dams: Steel-Faced Dam (Paper introduced by J. Barry Cooke), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p.19.

Singh, ed., 1992), p1-9.

Impungement Energy Loss at Combining Pipe Junction, Marc Serre, A. Jacob Odgaard and Rex A. Elder, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p766-771.

Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p139-

Riprap Stability Under Impinging Flow, James R. Leech, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p138.

The Role of the Repository Implementer in Providing and Demonstrating Safe Disposal of Radioactive Wastes, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p102-105.

Impregnation
Construction of Grout-Impregnated Fabric-Reinforced
Pipes, Robert Nicholls, CO June 92, p283-302.

Imputive issues:

Monitoring of Highway Pavements in Arizona Using Falling Weight Deflectometer, A. S. M. Mustaque Hossain and Larry A. Scofield, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p.276-290.

Nonlinear Impulsive Motions of Low-Tension Cables, Michael S. Triantafyllou and Christopher T. Howell, EM Apr. 92, p807-830.

Stress Wave Interaction in Finite Beam on Elastic Foundation, M. C. Wang and C. S. Little, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p580-583.

Compaction of Granular Soils—Remarks on Quality Control, Michele Jamiolkowski and Erio Pasquality (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p902-914.

Determination of In-Situ Stresses From Acoustic Emissions, A. K. Maji, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p405-

Effect of Lateral Stress on CPT Penetration Pore Pressures, J. P. Sully and R. G. Campanella, GT July 91, p1082-1088.

Evaluation of Compressive Strength for High-Strength Concrete by Pulse Velocity Method, R. Sri Ravindrara-jah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p115-126.

Evaluation of Soil Properties for Seismic Stability Analy-ses of Slopes, Geoffrey R. Martin, (Stability and Per-formance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p116-142.

Geotechnical Investigation Strategies for Lunar Base, Dan A. Brown and Glenn Rix, AS Apr. 92, p199-213. Ground Improvement of Rubbish Dump Over Reclaimed Tin Mine, Aziz Mustafa and Mohd Raihan Taha, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1324-1331.

In Situ Testing Program at the Waste Isolation Pilot Plant, T. M. Schultheis, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1090-1091.

Method for Estimating the In Situ Cohesion of Cemented Conglomerate, Edward A. Ncwatzki and David Kidd, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p158-174.

Observed and Predicted Response of Piles Under Dynamic Loads, Vijay K. Puri and Shamsher Prakash, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p153-169.

Pressuremeter and MDD Moduli for Road Design, P. J.
Sanders (Road and Airport Payement Response Moni-Sanders, (Road and Airport Pavement Response Moni-toring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p367-381.

Rapid Detection of Hydrocarbon Contamination in Ground Water and Soil, A. M. Chrestman, G. D. Comes, S. S. Cooper and P. G. Malone, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1165-1170.

Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049.

Stress-Strain-Strength Responses of Compressible Chica-go Glacial Clays, Richard J. Finno and Choong-Ki Chung, GT Oct. 92, p1607-1625.

go Glacial Clays, Richard J. Pinno and Choong-Ki.

A System for Measuring Moisture Transients in ClayBased Barrier Materials, A. W. L. Wan, B. H. Kjartanson, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1122-1128.

Type Curves for a Sing Test in an Infinitely or Semiinfinitely Thick Aquifer, Gary R. Chirlin, (Symposium
on Ground Water, Gerard P. Lennon, ed. and Shakrokh
Rouhani, ed., 1991), p169-174.
Use of a Method Specification For In Situ Compaction of
Clay-Based Barrier Materials, B. H. Kjartanson, N. A.
Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1129-1136.
Use of the Break-Off Method for the Evaluation of High
Performance Concrete, Tarun R. Naik and Amr S. Hassaballah, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),
p92-106.

ficiencie p92-106

Incentives

Financial Incentive Programs for Average-Size Construc-tion Firm, Roger W. Liska and Bill Snell, CO Dec. 92,

Nonmonetary Incentives: It Can be Done, Gary W. Fischer and Norman P. Nunn, ME Jan. 92, p40-52.

Incineration
Hazwaste May Leave Like a Jet Plane, CE Oct. 92, p14.
Incineration—Panacea or Pandemic? Harvey W. Rogers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p157-162.
Partitioning of Elements by Refuse Processing, Robert K. Ham, Victor A. Hammer and Gary Boley, EE Sept./ Oct. 92, p725-743.

A Study on the Utilization of Incinerator Residue for Asphalt Concrete, Kit M. Lum and Joo-Hwa Tay, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p217-229.

Incipient motion Incipient Motion cipient Motion during Static Armoring, Anders Wörman, HY Mar. 92, p496-501.

Dynamic Stresses in Granular Assemblies with Micro-structural Defects, A. Shukla, C. Y. Zhu and Y. Xu, EM Jan. 92, p190-201.

Indexing

A Markov Chain Approach for Analyzing Palmer
Drought Index, Marcel K. Tchaou, Saied Mostaghimi
and G. V. Loganathan, (Irrigation and Drainage: Soing a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p341-346.

India Case Study, Mahesh C. Chaturvedi, WR July/ Aug. 92, p445-464. Longhtore-Transport Model for South Indian and Sri Lankan Coasts, P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-48. Rengaraju and V. Thamizh Arasan, TE May/June 92, p371-380. Rainfall Intensity-Duration-Frequency Formula for India, Umesh C. Kothyari and Ramchandra J. Garde, HY Feb. 92, p323-336.

Indian reservations
A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, K. Branch, N. Coburn, G. Curtis, J. Holm and S. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p156-160.

Implementation of the Department of Energy's New American Indian Policy within the Civilian Radioactive Waste Management Program, J. Bennett Easterling and Beth Berlin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p161-165.

Negotiating the Voluntary Siting of Nuclear Waste Facili-ties—An Impossible Mission Made Possible, Robert M. Mussler, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p1565-1569.

ASCE Indonesia Group Holds Its First Seminar, CE Oct. 92, p70.

Water Availability and Water Demand Study for the Ci-tanduy River Basin, West and Central Java, Indonesia, R. Joseph Bergquist and Ed A. Toms, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p328-331.

Indoor air pollution

Integrated Assessment of Environmental Risk and Human Response, Mitchell J. Small, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p78-91.

Mass Transfer of Volatile Contaminants in Showers, John C. Little, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Industrial plants

An Event Size Probability Distribution for Risk Analysis, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p232-237.

Industrial wastes

Activity of Biomass in RBC System Treating Pulp Industrial Wastewater, Boshou Pan and L. Hartmann, EE Sept./Oct. 92, p744-754.

Celanese Wastewater Treatment Plant Upgrade, William R. Gluck, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p281-286.

Effect of Collector Dosage on Metal Removal by Precipitation/Flotation, Venbakm C. Gopalratnam, Gary F. Bennett and Robert W. Peters, EE Nov/Dec. 92,

Identifying Promising Hazardous Waste Reduction Technologies, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.139-144.

NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, Paul Makowski and John G. Garland, Ill., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p797-802.

pH Control in Anaerobic Treatment of Industrial Waste-water, G. K. Anderson and G. Yang, EE July/Aug. 92, p551-567.

Process Design for Bioremediation of Nitrogen-Species Contamination of Soils and Groundwater, Paul D. Turpin, J. Michael Henson and Steven L. Martin, (En-vironmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.

Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, Zhihuai Xue, Zhongling Hua, Qi Li and Naiyi Yao, (Environmental Engineering: Saving a Threatmend Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p376-381.

Utilization of Carbide Lime Waste in Asphaltic Concrete Mixes, Mohammed H. Al-Sayed, Ismail M. Madany and W. Al-Khaja, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p230-239.

and Kenneth L. Belgeson, ed., 1756, ps. 20-20-21.
Utilization of Carbide Lime Waste in Cement Mortar
Mixes, Waheeb A. Al-Khaja, Ismail M. Madany and
Mohammed H. Al-Sayed, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang,
ed. and Kenneth L. Bergeson, ed., 1992), p320-331.

Industrial water
Celanese Wastewater Treatment Plant Upgrade, William R. Gluck, (Environmental Engineering: Saving a Threatened Resource-In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p281-286.
Chlorination/Dechlorination and Post Aeration Key Operating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineering: Saving a Threatened Resource-In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p623-627.
Estuarine Environmental Impact Assessment Using a

tions, F. Pierce Linaweaver, ed., 1992), po23-o27.
Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

Nutrient Removal for Two Industrial Recycling Projects, Richard Sykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p382-387.

Environmental Amenities and the Location of Industrial Activity, Tim Allison and Frank Calzonetti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p587-592.

### Inelastic action

Inelastic action
Complete Biaxial Load-Deformation Behavior of RC Columns, Gang Gary Wang and Cheng-Tzu Thomas Hsu, ST Sept. 92, p2390-2609.
Dugdale Model Applied to Crack Interactions, K. Shah, H. Stolarski and J. F. Labuz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p498-501.

Inelastic Amplification Factor for Design of Steel Beam-Columns, I. S. Sohal and N. A. Syed, ST July 92,

Inelastic Limit States Design. Part I: Planar Frame Studies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

Inelastic Limit States Design. Part II: Three-Dimensional Frame Study, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2550-2568.

Nonlinear Cyclic Behavior of Reinforcing Bars Including Buckling, Giorgio Monti and Camillo Nuti, ST Dec. 92, p3268-3284.

Shakedown Limit State of Compact Steel Girder Bridges, M. G. Barker and T. V. Galambos, ST Apr. 92, p986-

Unconfined Granular Materials Thermalized by Fluctu-ating Horizontal Surfaces, Mark W. Richman and Richard E. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p900-903

Integrated GPS-INS for High-Accuracy Road Positioning, M. E. Cannon, SU Nov. 92, p103-117.

Adaptation of Horton and SCS Infiltration Equations to Complex Storms, Gert Aron, IR Mar/Apr. 92, p275-284.

ALIVE (Advance Linear Velocity): Surface Irrigation Rate Balance Theory, D. Renault and W. W. Wal-lender, IR Jan./Feb. 92, pl 38-155.

Derivation of Infiltration Equation Using Systems Approach, V. P. Singh and F. X. Yu, IR Nov/Dec. 90, p837-858.

Equivalent Kostiakov Parameters for SCS Infiltration Families, Subramania Iyer Sritharan, IR Jan/Feb. 92, p192-197.

psy2-197.

Expert System for Wastewater Collection System Infiltra-tion and Inflow Mitigation, Fadi A. Karaa, Hany H. Zaghloul and Richard Scholze, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p121-128.

Horton Infiltration Equation Revisited, A. Osman Akan, IR Sept./Oct. 92, p828-830.

IR Sept./Oct. 24, po.26-830. Interpretation of Kostiakov Infiltration Parameters for Borders, D. M. Hartley, IR Jan./Feb. 92, p156-165. Mathematical Zero-Inertia Modeling of Surface Irriga-tion: Advance in Furrows, Gerd H. Schmitz and Günther J. Seus, IR Jan./Feb. 92, p1-18.

Model and Calculations for Net Infiltration, Stuart W. Childs and Austin Long. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1633-1642. Optimization Model for Operation of Recharge Basins, Hasan Mushtaq, Larry W. Mays and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p305-309.
Optimum Center-Pivot Irrigation System Design with Tillage Effects, Y. Mohamoud, Thomas R. McCarty and Loyd K. Ewing, IR Mar/Apr. 92, p291-305. Settlement and Moisture Movement in Collapsible Soils, Mostafa El-Ehwany and Sandra L. Houston, GT Oct. 90, p1521-1535.

90, p1321-1333.
Simulation of Runoff and Infiltration of Disturbed Land, Ben Chie Yen and Robert Riggins, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p401-406.
Soil Moisture and Runoff—Another Look, Joseph A. Van Mullem, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p366-371.

Stochastic Analysis of Seasonal Hydraulic Conductivity, Ram Gupta, Ramesh Rudra, Trevor Dickinson, Naveen Pathi and Greg Wall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p32-38.

Two-Dimensional Analysis of Furrow Infiltration, T. Vogel and J. W. Hopmans, IR Sept./Oct. 92, p791-806.

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Adaptation of Horton and SCS Infiltration Equations to Complex Storms, Gert Aron, IR Mar./Apr. 92, p275-

Investigation of Curve Number Procedure, Allen T. Hjelmfelt, Jr., HY June 91, p725-737.

Dynamic Response of an Infinite Beam Supported by a Fluid, Z. G. Zhao and J. P. Dempsey, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p341-344.

# Inflatable structu

An Analysis of an Inflatable Module for Planetary Surfaces, Paul S. Nowak, Willy Z. Sadeh and Marvin E. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p78-88.

Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

cometric Modeling of Inflatable Structures for Lunar Base, Paul S. Nowak, Willy Z. Sadeh and Loretta A. Morroni, AS July 92, p311-322.

A Horizontal Inflatable Habitat for SEI, Kriss J. Kenne-dy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p135-146.

Rüssen J. Miller, ed., 1972, p. 137-1-70.
Inflatable Structures of Non-Circular Cross Section, Eric E. Matsumoto, Shayan Pazargadi and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 147-158.

Miller, ed., 1992.), p147-138.
Inflation Concept Development for Inflatable Lunar Structures, Craig E. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992.), p171-182.
In-situ Release of Solar Wind Gases from Lunar Soil, Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992.), p537-546.
Internal Pressure in a Lunar Inflatable Structure, Jeffrey

Internal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2360-2366.

Mechanical Equipment Requirements for Inflatable Lunar Structures, James M. Hines, Craig E. Miller and Richard M. Drake, AS Apr. 92, p248-256.

An Approach for Incorporating Inflows Uncertainty in Management Models, Luis Vives, Jesús Carrera and Richard N. Palmer, (Waier Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p84-89.

Density Currents Entering Lakes and Reservoirs, Vahid Alavian, Gerhard H. Jirka, Richard A. Denton, Marc C. Johnson and Heinz G. Stefan, HY Nov. 92, p1464-

1489.
Eapert System for Wastewater Collection System Infiltration and Inflow Mitigation, Fadi A. Karaa, Hany H. Zaghloul and Richard Scholze, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.121-128.

1992), p121-128.
Hydraulic Risk of Flood Disaster Reduction at Dams, Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p549-

3-70.
1-Channel Sediment Basins: An Alternative to Dam-Style Debris Basins, Wendy S. Gist, Scott E. Stonestreet and Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1000-1005.

1992), p1000-1005.
Integration of Chemical and Cement Grouting Techniques for Controlling Mine Water Inflows through Fractured Ground, Trevor G. Carter, Stephen H. E. Phillips and Patrick C. Cochrane, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-

Modeling the Salinity "History" of Great Egg Harbor Bay, New Jersey, Bryan Pearce, Howard McDivaine, Ed Simek, Pete Sucsy and Vibhu Vivek, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p959-964. Numerical Solution of Muskingum Equation, Mohammad Akram Gill, HY May 92, p804-809. Predicting Sediment Loads, Krishan P. Singh and Ali Durgunoglu, CE Oct. 92, p64-65. Water Supply Operations During Drought, Jhih-Shyang Shih and Charles ReVelle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p310-315.

Influents
Advantages of Installing Influent Fine Screens at a Large
Wastewater Treatment Plant, George G. Balog, Dave
L. Montgomery, Amarjit Sokhey, Manu A. Patel and
Norman R. Prima, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p287-290.
Chemical Dosing of Small Water Utilities Using Regresion Analysis, Glenn W. Ellis, Anthony G. Collins, Xi
Ge and Catherine R. Ford, EE May/June 91, p308-319.

Information
Basic Principles and Techniques in Knowledge Acquisition, Kenneth L. Modesitt, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p11-49.
In Search of Knowledge, Richard Forsyth, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p1-10.
Military Secrets for Sale, CE May 92, p8.
Water Resource Systems Models: Their Role in Planning, Daniel P. Loucks, WR May/June 92, p214-223.

Hot Line Opens for Entrepeneurs, CE May 92, p8.

Quake Clearinghouse Selected, CE June 92, pl 1. So Much for the Dewey Decimal System, CE Mar. 92, p8.

Information management

An Agenda for AEC PDES Research, Jason P. Heroux, Douglas J. Peters, William J. Rasdorf and John W. Baugh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 376-385.

Beyond GIS: The Integrated Spatial Information System, Lania Rivamonte, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 82-8.28.

Graphics-Based Site Information Management at Han-ford TRU Burial Grounds, Samuel R. Rod, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p450-457.

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Information Convservation and Retrieval—A Nordic Nuclear Safety Research Project, Mikael Jensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2202-2206.

Information Management for the Department of Faces

Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2202-2206.

Information Management for the Department of Energy Office of Civilian Radioactive Waste Management, Barbara A. Cerny, (High Level Radioactive Waste Management, Barbara A. Cerny, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p2078-2082.

Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Water Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p1-6.

Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374.

NIAM Conceptual Data-Base Design in Construction Management, William J. Rasdorf and Osama Y. Abudayyeh, CP Jan. 92, p41-62.

Primer for the Analysis of Composite Beams, E. C. Oguejiofor, M. U. Hosain and Jianing Ju, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1212-1219.

Records Management in Engineering Firms, Dennis O. Hamilton, ME Oct. 91, p346-356.

Records Management in Support of the Licensing Process for the High Level Radioactive Waste Management Forgram Committee, 1992), p2083-2087.

So Much for the Dewey Decimal System, CE Mar. 92, p8. Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert Logcher, CP Jan. 92, p85-105.

Use of GIS for Resource Management in Hong Kong, Jan. R. Selwood and Peter G. D. Whiteside, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p942-949.

Information Private Ruilder, Victor E. Sanvido, Seven L. Essues and Jo

Information retrieval
Aspects of Virtual Master Builder, Victor E. Sanvido,
Steven J. Fenves and John L. Wilson, El July 92, p261-

278.
Construction Applications of Relational Data Bases in Three-Dimensional GIS, Amr A. Oloufa, C. S. Papacostas and Reynaldo Espino, CP Jan. 92, p72-84.
Papacostas and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.
Information Conversation and Registeral—A Nortice

Jonn Carristian, CO Dec. 92, p716-730.
Information Conviervation and Retrieval—A Nordic Nuclear Safety Research Project, Mikael Jensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2202-2206.

17921, pz.202-2200. Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p582-589.

Information science In Search of Knowledge, Richard Forsyth, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p1-10.

Information system design NIAM Conceptual Data-Base Design in Construction Management, William J. Rasdorf and Osama Y. Abu-dayyeh, CP Jan. 92, p41-62.

Realizing Opportunity Horizons: DOE's Records Infor-mation Systems Design Efforts, Daniel J. Graser, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2098-2105.

Advanced Technology Applications in Chicago-Area Freeway Traffic Management Program, Joseph M. McDermott, TE May/June 92, p451-456.

Aspects of Virtual Master Builder, Victor E. Sanvido, Steven J. Fenves and John L. Wilson, El July 92, p261-

278.
Basic Planning and Design of a Water Utility Information System, Chun-Hou Orr, Bryan Coulbeck, Sergio T. Coelho and Helena Alegre, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p340-345.
Beyond GIS: The Integrated Spatial Information System, Lania Rivamonte, [Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p825-832.

Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p825-832.

Classifying Process Control Information, Victor E. Sanvido and John Messner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p340-347.

A Design Product Model for Computer Integrated Structural Engineering, Jerome Madden and Richard Sause, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p113-120.

A Encility Programming Product Model, Gregory M. Perkinson, Francois Grobler and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p41-48.

Group Prioritization System for Army Military Construction, Bruce C. Goettel, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p49-56.

Hypertext and Claim Analysis, Geoffrey Bubbers and

Hypertext and Claim Analysis, Geoffrey Bubbers and John Christian, CO Dec. 92, p716-730.

John Christian, CO Dec. 92, p716-730.

INFO: An Information Framework for Facility Operators, James P. Beckett and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p57-64.

wright, ed., 1992, p57-64.
An Information System Architecture for Construction Materials, Sami Dib and Francois Grobler, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p332-339.
Japan Leads World in IVHS Progress, CE Jan. 92, p25-26.

26.

Representing Building Product Information Using Hypermedia, Sunil K. Evt, Sari Khayyal and Victor E. Sanvido, CP Jan. 92, p3-18.

A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p411-416.

Session Summary—Behavioral, Social, and Institutional Aspects of Risk Analysis, Mitchell Small, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p355-337.

Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.

Trend in Local Area Network Utilization, Luh-Maan Chang and Li-Chung Chao, ME Jan. 92, p27-39.

Information theory

Chang and Li-Chung Chao, ME Jan. 92, p27-39.

Haformation theory

Basic Principles and Techniques in Knowledge Acquisition, Kenneth L. Modesitt, (Knowledge Acquisition in Civil Engineering, Tomasx Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p11-49.

Information Theory and Multi-Objective Evaluation, Jay R. Lund and Morris Israel, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p486-491.

Information Theory in Risk Analysis, James D. Englehardt and Jay R. Lund, EE Nov/Dec. 92, p890-904.

Infrared detectors

Non-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl121-1128.

Vehicle Classification Using Infrared Image Analysis, Yean-Jye Lu, Yuen-Hung Hsu and Xavier Maldague, TE Mar/Apr. 92, p223-240.

Infrared photography
Rainfall Area Identification Using GOES Satellite Data,
Ke S. Cheng and Sun F. Shih, IR Jan/Feb. 92, p179190.

287

Infrared scanning Forensic Analysis Techniques for Joint Scalants, Rogers T. Graham and Larry N. Lynch, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p404-414.

Informas L. White, ed., 1992), p404-414.
Infrared Thermographic Sensing of Sewer Pipeline Problems, Gary J. Weil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992),

p890-895

psys-sys.

Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange", John Zachar and Tarun R. Naik, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p107-115.

me Considerations for Instrumentation for a Lunar-Based Solar Observatory, Raymond N. Smartt, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1890-1901.

Advancing Bridge-Pier Scour Engineering, Peggy A. Johnson, El Jan. 91, p48-55.

son, El Jan. 91, 948-53.
Alliance Promotes Infrastructure Investment (ltr), Ellis S. Vieser, CE Sept. 92, p38.
Application of Large infrastructure Project Financing to Construction Projects in Space, Michel Lyonnet du Moutier and Patrick Cohendet, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., 1892, p2196-2207.
Arbhir Lesons from Extreme Environments to Solve Arbhir Lesons from Extreme Environments to Solve

Applying Lessons from Extreme Environments to Solve Problems on Earth and in Space, Larry Bell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p240-248.

The Army Corps of Engineer's (ACE) Interaction with the Mission to Planet Earth Initiative, Robert C. Lozar, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2094-2103.

Miller, ed., 1992), p2094-2103.
ASCE President Tells House Panel More Transportation Research Funds are Needed to Revive U.S. Infrastructure, NE Apr. 92, pl.
Baltimore Waste Water Infrastructure a Health Plan, George G. Balog, Gary A. Wyatt and Edward Serp, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p429-432.
Building a Space Infrastructure: The Reclamation Experi-

source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p429-432.

Building a Space Infrastructure: The Reclamation Experience, Stephen L. Gillett, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p69-77.

Cathodic Protection Diagnostics for Corrosion Mitigation of Infrastructure Components, Vicki L. Van Blaricum, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p137-144.

CE Summiteers Offer Views on Problems Troubling to Profession, CE Aug. 92, p66-67.

A Chance Constrained Optimization Model Using Kinematic Wave Routing for Stormwater Infrastructure Rehabilitation, Timothy L. Jacobs and Miguel A. Medina, Jr., (Water Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p748-753.

Composites Performance in the Infrastructure, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p532-545.

Construction and Development of a Human Base on Witchen St.

1992), p532-545.

Construction and Development of a Human Base on Mars, Owen Gwynne, Yoji Ishikawa, Yukinobu Yamamoto, Hisateru Uyeda and Thomas Bongiovi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p89-99.

Construction Jobs Lurk Underground, CE Aug. 92, p8.

Critical Elements of Development Impact-Fee Programs, Arthur C. Nelson, James C. Nicholas and Julian C. Juergensmeyer, UP May 90, p34-47.

Critical Issues for Engineering Managers, Delon Hamp-ton, ME July 92, p235-242.

ton, ME July 92, p.235-242.
Developing Infrastructure Lifecycle Solutions, Steven B.
Glimpse and Jeffrey M. Young, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p818-824.

Emerging Issues in Transportation Facilities Management, Sue McNeil, Michael Markow, Lance Neumann, Jeffrey Ordway and Donald Uzarski, TE July/Aug. 92, p477-495.

Engineering for City Slickers, CE Feb. 92, p12.
Excavation and Support for the Urban Infrastructure, T.
D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

87262-900-6, 272pp.
Excavation and Support Systems in Urban Settings, J. P. Gould, G. J. Tamaro and J. P. Powers, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171.
Future Trends and Needs in Hydraulics, Daryl B. Simons, HY Dec. 92, p1607-1620.

The Heartbeat of the Artery, David L. Druss and Burton P. Kassap, CE Jan. 92, p44-46. Infrastructure Bill Clears Congress, NE Nov. 92, p3. Infrastructure Group Adds Up Pluses for Year, CE Sept.

Infrastructure Investment Builds Economic Muscle, Neil S. Grigg, CE June 92, p6.
Infrastructure Issue Overlooks Utilities, Kenneth L. Ferry, CE May 22, p39.
Infrastructure Plans Profilerate, Casey Dinges, CE Mar.

92, pl 14.

Infrastructure Privatization Accelerates, CE Mar. 92,

infrastructure Privatization Accelerates, CE Mar. 92, p18,20.
Inventory of Highway Infrastructure Problems Through Bridge Inspection, Enno Koehn and N. A. Barroeta, El Apr. 91, p133-149.
James McCarty Begins Term as ASCE's 124th President, CE Nov. 92, p74-73.
A Knowledge Based System with Uncertainty for the Soil, Cheiri Boulemia, Daniel Boissier and Jihad Al-Hajjar, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p365-368.
Landslide Hazard Analysis for Pipeline Design, Northeast Utah, Jeffrey R. Keaton, Robert M. Robison and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204.
Launch Facilities as Infrastructure, Mike Trial, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2064-2071.
Life-Cycle Considerations in Urban Infrastructure Engineering, David Novick, ME Apr. 90, p186-196.
Lifeline Earthquake Engineering in the Central and East-

neering, David Novick, ME Apr. 90, p186-196. Lifeline Earthquake Engineering in the Central and East-ern U.S., Technical Council on Lifeline Earthquake En-gineering Monograph No. 5, Donald B. Ballantyne, ed., 1992, 0-8726-902-3, 200pp.
Materials Key to Rehab, Conference Speakers Say, CE Oct. 92, p11-12.

Military Techniques for Expedient Repair of Earthquake Damaged Harbor Infrastructure, Lyndell Z. Hales and Ivan L. Sheall, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p370-386.

New Infrastructure Center Formed, CE Mar. 92, p8.

Steven A. Hugnes, ed., 1992), p.570-386.
New Infrastructure Center Formed, CE Mar. 92, p.8.
New Policies Adopted by ASCE Board, NE Nov. 92, p.3.
On Deciding Between the Use of Engineering Standards and Risk Analysis, George W. Annandale, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p.219-235.
Original Long Text Scheduling of Reides Deck Replace.

Optimal Long-Term Scheduling of Bridge Deck Replacement and Rehabilitation, Timothy L. Jacobs, TE Mar./Apr. 92, p312-322.

Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1055-1068.

p1055-1068.
Out with the Old, Thomas B. Terpening and Michael Irwin, CE Sept. 92, p50-53.
Overview of Design and Construction in the Urban Environment, Thomas R. Kuesel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p1-5.
Pay As You Grow, Teresa Austin, CE Feb. 92, p64-65.
Pennoni, In Farewell Address as President, Urges Professionalism for Civil Engineers, CE Dec. 92, p75.

Principles of Holistic Medicine Applied to Infrastructure Maintenance: A Test Case, Fred Catapano, CE Jan. 92, p68-69.

Prospects for Clean Water Bill Hold Center Stage at Sev-enth Civil Engineering Summit, NE July 92, pl,4. Rehabilitation of Infrastructure in Infill Sites, Stephen Sussna, El Oct. 92, p381-387.

Sussas, E. Co. 74, p.301-361.
The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p80-91.

Roof Management Alternatives for Aging Launch Infra-structure, Dennis Firman, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2056-2063.

Rush of Legislation Concludes 102nd Congress, Casey Dinges, CE Dec. 92, p112.

Session Summary—Risk and Reliability of Water Resources Infrastructure, Dan Taylor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p350-354.

Small Systems Struggle, John Prendergast, CE Jan. 92, p40-43.

peu-43.
Social-Economic Impacts of the October 1983 Flood in Pima County, Arizona, David A. Smutzer, (Hydraulic Engineering: Saving a Threatnead Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1072-1075.
Searce Civil Engineering Ontion—A Progress Report

Space Civil Engineering Option—A Progress Report, Marvin E. Criswell and Willy Z. Sadeh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2136-2146.

Start-Ups, CE Dec. 92, p8.

Study Analyzes New Jersey Infrastructure Needs, CE Feb. 92, p24,26.

24, p.2-120. Sylvan Beach Pier Rehabilitation Study, Peter W. Soltys, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662. Timely Technology: GIS Use in the U.S., CC Nov. 92, p12-13.

Urban Infrastructure: Our Crumbling POTW's, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p685-689.

Monammao Aramouz, ed., 1992, po63-093. The Use of Road Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p164-169. User Fees: Who Pays and How Much?, CE Sept. 92, p19. Water Program Upgrade Set for Down Under, CE Apr.

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, 0-87262-876-0, 920pp.

## Injectio

Current Chemical Grout Engineering in Japan, Ryolo Yonekura and Munehiko Kaga, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-

Development of a Gas-Liquid Reaction Injection System, Shunsuke Shimada, Masanori Ide and Hiromu Iwasa, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p325-336.

Effectiveness of Injected Cement Grout under Harsh Environmental Conditions, G. Ballivy, J. C. Colin and T. Mnif, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p588-600.

Juran, ed., 1992, p. 388-000. Rehabilitation of Conrete Dams: Laboratory Simulation of Cracking and Injectability, G. Ballivy, K. Saleh, T. Mnif, J. Maniez, L. M. Landry and M. Nadeau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625.

Some Factors Related to Injected Shape in Grouting, Akira Mori, Masahito Tamura, Hideaki Shibata and Hideo Hayashi, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p31–324.

Time-Viscosity Relationships of Newtonian and Binghamian Grouts, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p663-675.

Injuries
Role of Designers in Construction Worker Safety, Jimmie
Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Injury rates
Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Inland waterways
Trouble on the Waterways? Paul Tarricone, CE Feb. 91, p52-55.

Ialets, waterways
57 Years of Coastal Engineering Practice at a Problem Inlet: Indian River Inlet, Delaware, Jeffrey A. Gebert, Keith D. Watson and Augustus T. Rambo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-519.

Schul J., Watson and Augustus T. Rambo, (Coasial Engineering Practice '92, Steven A. Hughes, ed., 1992), p503-519.

Design and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coasial Engineering Practice '92, Steven A. Hughes, ed., 1992), p554-570.

A Design Manual for Coastal Fluidization Systems, Richard N. Weisman, Gerard P. Lennon and James E. Clausner, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p862-878.

Design of a Mechanical Refuse Barrier, Edward J. Schmeltz, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p680-696.

DYNLET! Network Model for Tidal Inlet Dynamics, Michael Amein and Nicholas C. Krzus, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p644-656.

An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536.

Investigation of Coastal Conditions at Oregon Inlet, NC for the Replacement of the Herbert C. Bonner Bridge, Jeffrey G. Shelden, John R. Lesnik and M. Anthony Young, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.

Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-hsi Chu and Gilbert K. Nersesian, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.

Simple Conceptual Explanation of Down-Drift Offset Inlets, Scott L. Douglass, WW Mar./Apr. 91, p136-142.

The Talbert Channel Ocean Outlet Project, Craig B. Leidersdorf, Kenneth E. Smith and Rub-Ming Li, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.

Innovation
A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.
CM Launches 'Pre-Emptive Strike' in Bid Documents, CE June 92, p18,20.

Provincements in Industrialized Housing.

Customer Requirements in Industrialized Housing, Robert L. Armacost, Paul J. Componation, Michael A. Mullens and William W. Swart, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p48-57.

Design-Build Goes Public, James Denning, CE July 92, p76-79.
Education and Research in Japan's Construction Industry, Antonio Nanni, Hikaru Takeuchi and Kazuhisa Yahagi, El July 92, p284-293.
Featuration of Advanced Construction Technology with

Evaluation of Advanced Construction Technology with AHP Method, Miroslaw J. Skibniewski and Li-Chung Chao, CO Sept. 92, p577-593. Fax Network On-Line for Large Documents, CE July 92,

p11.
Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Iesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.
Government-Industry Cooperation: Fast-Track Concrete Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92, p454-471.

p434-471. Georotting, Soil Improvement and Geosynthetics, Geo-technical Special Publication No. 30, 2 vols, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, 0-87262-865-5, 1480pp.

Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992, 0-87262-898-1, 127pp. Hydraulic Demolition Preserves Historic Bridge, CE Aug. 92, p77.

92, p.17.

Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelps, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p.519-531.

Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.

JVHS Advances in Chicago, CE Mar. 92, p17-18.

Japan Leads World in IVHS Progress, CE Jan. 92, p25-26.

'Kids at Work' Works at Brown & Root, CE May 92, p27. May Issue Corners Engineers Concerns (ltr), Norman L. Rabbers, CE July 92, p32-33. Metro Nearing Completion of Prototype Tunnel, CE Jan.

92, p14,16.

25, p14,10.
The National Aero-Space Plane Program—A Revolutionary Concept, Robert R. Barthelemy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2382-2391.

Noncontractual Methods of Integration on Construction Projects, C. H. Nam and C. B. Tatum, CO June 92, p385-398.

OCEA, American-Style, Paul Tarricone, CE July 92, p57-60. p57-60.
Opportunities and Constraints for the Innovative Geotechnical Contractor, Peter J. Nicholson and Donald A.
Bruce, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman,
ed., 1992), p46-64.
Seattle Oil Keeps Going and Going, CE Mar. 92, p8.
Seismic Fuse Does Double Duty in Arizona, CE Mar. 92,

Strategies for Technology Push: Lessons from Construc-tion Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524. Stripper Makes Paint Removal Less of a Blast, CE Apr. 92, p85.

Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

B. Tatum, CO Mar. 92, p129-141.
Tort Liability: Limiting U.S. Innovation, Harvey M. Bernstein, CE Nov. 92, p6.
Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992, 0-87262-815-9, 374pp.
The U.S. Bureau of Reclamation—New Directions in Water Management and Conservation, Allen R. Powers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p232-237.

Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Inorganic contaminants

Interaction of Inorganic Leachate with Compacted Poz-zolanic Fly Ash, Tuncer B. Edil, Linda K. Sandstrom and P. M. Berthouex, GT Sept. 92, p1410-1430.

Inspection
Constructability for Drilled Shafts, John P. Turner, CO
Mar. 92, p77-93.
Windows and Impact on Dust and

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

Infrared Thermographic Sensing of Sewer Pipeline Prob-lems, Gary J. Weil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p890-895.

Inspection Planning for Surface Fatigue Cracks, P. Friis-Hansen and H. O. Madsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p312-315.

Markov Decision Processes in Structural Optimization, Zongwei Tao, J. Hugh Ellis and Ross B. Corotis, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-542. New York Canal Inspection Drawing to a Close, CE Jan.

92, p24-25.

Re-Qualification of Offshore Platforms, R. G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p427-443.

Systems Reliability Approach to Fatigue of Structures, A. Karamchandani, J. I. Dalane and P. Bjerager, ST Mar. 92, p684-700.
The U.S. Naval Facilities Offshore Platform Inspection, Maintenance, Repair and Rehabilitation Program, T. Regin and T. O'Boyle, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p531-545.

Loss of Ground During CFA Pile Installation in Inner Urban Areas, Jacek K. Leznicki, Melvin I. Esrig and Robert G. Gaibrois, GT June 92, p947-950.

Institutional constraints

Institutional Constraints
Institutional Constraints to the Use of Coal Fly Ash in
Civil Engineering Construction, Timothy N. Kyper,
(Utilization of Waste Materials in Civil Engineering
Construction, Hilary I. Inyang,
ed. and Kenneth L.
Bergeson, ed., 1992), p32-43.
Water Management: Challenge and Opportunity, Warren
Viessman, Jr., WR Mar./Apr. 90, p155-169.

Instream flow Are High and Low Flow Habitat Values Really the Same? Terry Waddle, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p374-

Habitat Simulation in United States, Britain, and France, Robert T. Milhous, Ian Johnson, Yves Souchon and Sylvie Valentin, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamour, ed., 1992), p362-367

Is An Instream Flow Need a Beneficial Use? Robert T. Milhous, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p368-373.

Civil Engineering Education: Case Study Approach, Jef-frey S. Russell and Bob G. McCullouch, El Apr. 90, p164-174.

Instructors

Conference Dedication to Jerome M. Raphael, Eric B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p1-4.

Inastramentation

Analysis of Behavior of Earth Dam Using Strong-Motion
Earthquake Records, Mourad Zeghal and Ahmed M.
Abdel-Ghaffar, GT Feb. 92, p.266-277.

Consistency and Reproducibility of Falling Weight Deflections, Christ van Gurp, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p.291-305.

Design and Performance of Bath County Upper Dam and Reservoir Slopes, K. L. Wong, D. E. Kleiner, A. M.
Wood, M. C. Geary and R. G. Oechsel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.371-386.

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2027-2082.

Determination of Geotechnical Properties of Uranium Tailings, Antonio Santos, José M. Martínez and Juan Luis Santiago, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p175-191.

Boulanger, ed., 1992), p175-191. Effect of Tire Parameters on Pavement Damage and Load-Equivalency Factors, Peter E. Sebaaly and Nader Tabatabae, TE Nov./Dec. 92, p805-819. Field Instrumentation and Performance Monitoring of Rigid Pavements, Raymond S. Rollings and David W. Pittman, TE May/June 92, p361-370. Geosynthetic Strength—Ultimate and Serviceability Limit State Design, R. J. Fannin and S. Hermann, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1411-1426.

Hydraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rive, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-

In-Flight Calibration of Mass Spectrometer, Dumitru Ristoiu, Gavrila Toderean, Iosif Chereji, Daniel Olim-piu Ursu and Vadim Glebovici Istomin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 92264-2270.

In-situ Stress and Strain Measurements in Dynamically Loaded Asphalt Pavement Structures, C. H. Vogelzang and S. R. Bouman, (Road and Airport Pavement Resporse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p244-260.

Robert A. Eaton, ed., 1992), p244-260.
Installation and Monitoring of Thermal Conductivity
Suction Sensors in a Fine-Grained Subgrade Soil Subjected to Seasonal Frost, Walaa E. I. Khogali, Kenneth
O. Anderson, Julian K. Gan and Delwyn G. Fredlund,
(Road and Airport Pawment Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed.,
1992), 1153-167. 1992), p153-167.

Instrumentation for a Full-scale Pavement Test in the Danish Road Testing Machine, Jørgen Krarup, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

p96-111.

290

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, Richard S. Haupt and Dale C. Bull, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p125-137.

Instrumentation for Vehicle Mobility Testing in the Frost Effects Research Facility, Elisabeth Berliner and Sally Shoop, (Road and Airport Pavement Response Monitor-ing Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p12-26.

'Odd Couple' Techniques Aid Site Assessment, CE May 92, p22,26.

Pavement Instrumentation for Verifying Elastic Theory, S. Nazarian, E. Y. Chai and D. R. Alexander, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

Pavement Subdrainage Instrumentation in Indiana: A Case Study, T. D. White and Zubair Ahmed, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p415-425.

Performance of Free Draining Base Course at Fort Campbell, Kentucky, William P. Grogan, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-448.

Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hult-gren, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p775-787.

Pile Driving: Can it Cause Slope Movement? D. G. Anderson, R. E. Riker and B. P. Erickson, (Ports '92, David Torseth, ed., 1992), p350-363.

Plot-scale Field Experiment of Surface Hydrologic Processes with EOS Implications, Charles A. Laymon, Emir J. Macari and Nicholas C. Costes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2082-2093.

Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.

Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p99-116.

ed. and Francis C. McLean, ed., 1992), p99-110. Site Qualification for Inclinometer Surveyng Using Tiltmeters, Howard Egan, Gary R. Holzhausen and Dan Sampson, Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551.

Smart Structures, Rita Robison, CE Nov. 92, p66-68.

Soil/Structure Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p396-399.

Some Considerations for Instrumentation for a Lunar-Based Solar Observatory, Raymond N. Smartt, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1890-1901. Stability Evaluation During Staged Construction, Charles C. Ladd, GT Apr. 91, p540-615.

Status of Scour Instrumentation Development, Roy Trent and Ian Friedland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1088-1093.

piuse-1093.

Thaw Weakening Research at the Minnesota Road Re-search Project, Michel J. Hovan and David E. New-comb, (Road and Airport Pavement Response Monitor-ing Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p138-152.

The World's Smallest Road, CE Nov. 92, p10.

Insulation
A Transparent, Porous Superinsulator, Arlon J.
Hunt, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p398-403.

Microbiologically Induced Corrosion, P. J. B. Scott and Michael Davies, CE May 92, p58-59. Tapered Insulation Builds up Roof, CE May 92, p98.

Insurance rates
Insurance Change May Save Millions, CE July 92, p11.

Behavior of Thermal Wedges in Oscillating Reservoir Flow: A Case Investigation, Vahid Alavian, Neil Surferland and Ming Shiao, (Hydraulic Engineering: Suring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p501-506

Design Guidelines for a Sedimentation Control System at Open Channel Diversions, Vincent S. Neary and A. Jacob Odgaard, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1982), p198-

203.

Hydraulic Structures Versus Zebra Mussels, John J. Ingram and Andrew C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611.

Innovative Intake Design for Raritan River, Paul Y. Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawavevr, ed., 1992), p.220-225.

ed., 1992), p220-225.

Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-256.

A Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, M. L. Spaulding, K. Jayko, T. Isaji, E. L. Anderson, E. Howlett, J. C. Swanson, D. Mendelsohn and S. Puckett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175.

Integral equations
Rapidly Varied Flow Analysis of Undular Bore, Rodney
J. Sobey and Maarten W. Dingemans, WW July/Aug.
92, p417-436.

Intelligent vehicle highway systems
IVHS Aids Traffic Flow, CE Aug. 92, p16,18-19.

LGG System for Emergency Response Applications, Anthony A. Saka, SU Aug. 92, p90-98.
Plan Estimates Cost of Getting 'Smart', CE Oct. 92,

p24,27.
Potential ISTEA Funds Boost Bridge Conference, CE Aug. 92, p10,12.
Start-Ups, CE Oct. 92, p8.

Tateraction models

Cable-Stayed Bridge Vibration Due to Road Surface
Roughness, Ton-Lo Wang and Dongzhou Huang, ST
May 92, p1354-1374.
Feedback Mechanisms for Operational Simulation, Amr
A. Oloufa and Keith C. Crandall, CP Apr. 92, p161-

Interactions
Component Wave Interactions and Irregular Wave Kinematics, Jun Zhang, Robert E. Randall and C. Anthony Spell, WW July/Aug, 92, p401-416.
Contaminant-Grout Interaction, Stephan A. Jefferis, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1393-1402.
Design of Piles in Permafrost Under Combined Lateral and Axial Load, A. Foriero and B. Ladanyi, CR Sept. 91 p18-162.

y1, p89-105.
Interaction of Steep Waves with Vertical Walls, D. Sen, WW Sept./Oct. 92, p453-473.
Isssues in Developing Control Zones for International Space Operations, Blair A. Nader and Kumar Krishen, AS Oct. 92, p387-404.
Motion Response and Wave Attenuation of Linked Floating Breakwaters, Iraklis A. Valioulis, WW Sept./Oct. 90, p558-574.
Nonlinear Wave Burney.

yo, p558-574.
 Nonlinear Wave Runup on Large Circular Cylinders, David L. Kriebel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p173-187.
 Re-examination of Ylinen and Other Column Equations, John J. Zahn, ST Oct. 92, p2716-2728.
 Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188-202.

202 Wave Force Procedure for Platform Design, John C. Heideman and Timothy O. Weaver, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p496-517.

pay0-317.
Wave Effects on Offshore Structures—Some Recent Research, Michael Isaacson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p381-426.
Wave-Current Interaction with a Large Structure, Michael Isaacson and Kwok Fai Cheung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80.

Interactive graphics
ASG COGO, Brian Brenner and Dennis Njuguna, CC
Mar. 92, pl.4-6.
Computational Laboratory for Discrete Element Geomechanics, John M. Ting and Brent T. Corkum, CP Apr.
92, pl29-146.

Computer Graphics in Detailing Strut-Tie Models, Ab-dulsalam Alshegeir and Julio Ramirez, CP Apr. 92, p220-232.

guissaum Alsnegeir and Julio Ramirez, CP Apr. 92, p220-232.

Computer-Aided Support for Water Quality Modeling of the Russian River, John F. DeGeorge and Gerald T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p182-187.

An Experimental Model Using a Graphical User Interface, David G. Kleinschmidt and Bryan R. Pearce, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p36-47.

Ground-water Policy-making Support: USEM Optimization Modeling Plus GIS and Graphics, Richard C. Peralta, Christopher M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza, Douglas Ramsey and Kurt Vest, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p305-310.

Bighway Design in 3-D, Richard D. Sullivan, CE June 92, p68-70.

Object-Oriented Finite Element and Graphics Data-

p68-70.

Object-Oriented Finite Element and Graphics Data-Translation Facility, Jamal A. Abdalla and C. John Yoon, CP July 92, p302-322.

Real-Time Simulation and Visualization of 2-D Surface Water Flow, H. C. Lin, N. L. Jones and D. R. Richards, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p353-340.

Taming Environmental Data, Neno Duplancic and Gregory Buckle, CE Aug. 92, p36-58.

Water-Quality Modeling for Decision Making, G. T. Orlob, WR May/June 92, p295-307.

Interactive systems
Achieving Computer-Integrated Construction, Matt Syal,
M. Kevin Parfitt and Jack Willenbrock, CC Aug. 92, p10-11

Cranes, Concrete, Construction...and Computers, Paul Tarricone, CE June 92, p44-47.

ETBC: Interactive Software for Blaney-Criddle Estimates of Evapotranspiration, Ronald L. Elliott, Eldon L. Johns and Paul A. Weghorst, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p134-139.

How to Implement GIS: Tools and Procedures, Robert Newton, CC Nov. 92, p9-11.

Integrated Pavement Management System for Kennedy International Airport, Gonzalo R. Rada, Charles W. Schwartz, Matthew W. Witczak and Scott D. Rabinow, TE Sept./Oct. 92, p666-685.

Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, Guido Schattanek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p315-326.

Linking GIS with Hydrologic Modeling, Barry Evans, Jeffrey Grimm, Larry Thornton and Paul Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p499-504.

Object-Oriented Approaches for Integrated Engineering

Object-Oriented Approaches for Integrated Engineering Design Systems, Richard Sause, Kirk Martini and Gra-ham H. Powell, CP July 92, p248-265.

Object-Oriented Finite Element and Graphics Data-Translation Facility, Jamal A. Abdalla and C. John Yoon, CP July 92, p302-322. Solid Modeling of RC Beams: 2. Computational Environ-ment, J. L. Preston and M. A. Austin, CP Oct. 92,

p404-416.

Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert Logcher, CP Jan. 92, p85-105.

Use of Interactive Simulation Environments for the Development of Negotiation Tools, Allison M. Keyes and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Water's New World, Laura Lang, CE June 92, p48-50.

**Interagency cooperation** 

Interagency Cooperation
An Interagency Program to Improve Irrigated Agriculture, A. R. Dedrick, W. Clyma, A. J. Clemmens, R. D. Gibson, J. A. Replogle, R. E. Ware, P. N. Wilson and D. B. Levine, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600.

Intercepting sewers

Intercepting sewers

Bitimating Urban and Suburban Sewerage Flows with Assistance of GIS Technology, Paul Kirshen, Daniel
Nvule and John Corlins, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p208-212.

Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu A. Patel and Burton D. Sklar, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280.

Interchanges
Actuated Traffic Signal Control at Diamond Interchange,
Kit M. Lum and Clyde E. Lee, TE May/June 92, p410-

Change Intervals and Lost Time at Single-Point Urban Interchanges, James A. Bonneson, TE Sept./Oct. 92, p631-650.

Start-Ups, CE Dec. 92, p8.

Traffic Impact Study for a Regional Shopping Center at a Basque City. A European View, Mikel Murga, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pauswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), 984-88.

ected systems

LGG System for Emergency Response Applications, Anthony A. Saka, SU Aug. 92, p90-98.

Interface shear

Dynamic Interface Shear Strength Properties of Geomembranes and Geotextiles, M. K. Yegian and A. M. Lahlaf, GT May 92, p760-779.

Kettleman Hills Waste Landfill Slope Failure. I: Liner-System Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668.

Micromechanics-Based Constitutive Model for Interface Shear, M. P. Divakar and A. Fafitis, EM July 92, p1317-1337.

Interfaces

Analysis and Implementation of Thin-Layer Element for Interfaces and Joints, K. G. Sharma and C. S. Desai, EM Dec. 92, p2442-2462.

Antiplane Problems of Monoclinic Material, Chien-Ching Ma, EM Sept. 92, p1765-1782.

Cracking and Debonding on Bimaterial Interface under Uniform Loading, Mikiya Okumura, Norio Hasebe and Takuji Nakamura, EM June 92, p1113-1128.

Exact Formulation of Axisymmetric-Interface-Element Stiffness Matrix, Zebong Yuan and Koon Meng Chua, GT Aug. 92, p1264-1271.

Fiber Pullout and Bond Slip. I: Analytical Study, Antoine E. Naaman, George G. Namur, Jamil M. Alwan and Husam S. Najm, ST Sept. 91, p2769-2790.

Fracture Analysis of Mortar-Aggregate Interfaces in Concrete, Kwang Myong Lee, Oral Buyukozturk and Ayad Oumera, EM Oct. 92, p2031-2047.

Fracture Toughness for Steel Fiber-Cement Paste Interfacial Zone, Mitsunori Kawamura and Shin-ichi Igarashi, MT Aug. 92, p227-239.

Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, N. Navayogarajah, C. S. Desai and P. D. Kiousis, EM May 92, p90-1011.

Knowledge Representation in Water Resource Management Using Prolog and Natural Language, Richard N. Palmer and Lynn Spence, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992, p144-160.

Numerical Simulation of Dynamic Shear Transfer, T. Krauthammer and A. Koubaa, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p139-149.

Soft Touch People Mover Central Control, R. D. Milnes, R. S. Fahringer and J. B. Bojarski, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p199-206.

Source Control of Intrusions Along Horizontal Boundary, J. Bühler, S. J. Wright and Y. Kim, HY Mar. 92, p442-459.

Two Paradigms for OOP Models for Scientific Applications of Tester and G. E. D. Morene and G. E. D. More

Two Paradigms for OOP Models for Scientific Applica-tions, T. J. Ross, J. P. Morrow, L. R. Wagner and G. F. Luger, (Computing in Civil Engineering and Geograph-ic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p535-542.

Interfacial tension

Determination of Interfacial Shear and Normal Stresses in Fiber Pull-Out, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1004-1007.

Interferometry
Low Frequency Astronomy from Lunar Orbit, John P. Basart and Jack O. Burns, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1913-1924.
The Proposed NASA Lunar-Based Astronomical Observatories, Paul N. Swanson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1798-1808.
SALSA: A Lunar Submillimeter-Wavelength Array, M. J. Malboney and K. A. Marsh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1902-1912.

Trends in Phreatic Surface Motion in Rubble-Mound Breakwaters, Kevin R. Hall, WW Mar./Apr. 91, p179-

Internal pressure
Buckling of Pressurized Axisymmetrically Imperfect Cylinders Under Axial Loads, Jin-Guang Teng and J. Michael Rotter, EM Feb. 92, p229-247.

chaet Rotter, EM Peb. 92, p229-247.
Internal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2360-2366.
Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

International compacts
Equity and International Agreements for CO<sub>2</sub> Containment, Dallas Burtraw and Michael A. Toman, EY Aug. 92, p122-135.

In New York, Cooperation Agreements Signed with Four Engineers' Groups, NE Nov. 92, p15.

Removal of VOCs and TEL in Iron-Rich Groundwaters, James E. Rumbo, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p116-121.

TOC Removal by Coagulation and Softening, S. R. Qasim, S. A. Hasham and N. I. Ansari, EE May/June 92, p432-437.

Turning on the Waterworks, Donald E. Eckmann, CE Aug. 92, p48-51.

Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561.

Evaluation of Processing Options for Lunar Oxygen Production, Andrew Hall Cutler and Robert D. Waldron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p704-713.

A Modified Sulfate Process to Lunar Oxygen, Thomas A. Sullivan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p641-650.

Russell J. Miller, ed., 1992, po41-030.

Removal of Trihalomethane Precursors by Ferric Chloride Coagulation, Anne Studstill and Appiah Amirtharajah, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p526-531.

Steady State Composition with Low Fe<sup>2+</sup> Concentrations for Efficient O<sub>2</sub> Production by "Magma" Electrolysis of Lunar Soils, Larry A. Haskin and Russell O. Colson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p651-665.

Toward a Low-Emissions Wastewater Treatment Plant, Albert B. Pincince, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl.-6.

Alternative Methods of Drainage Management in San Joaquin Valley, California, S. Alireza Taghavi and Ben Everett, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337.

Monammac Karamouz, etc., 1972.), p332-333.

Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, John L. Merriam, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p623-630.

Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Faeh and Geraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992., p1112-1117.

Cost Models for Preliminary Economic Evaluation of Sprinkler Irrigation Systems, D. Kumar, C. D. Heatwole, B. B. Ross and D. B. Taylor, IR Sept./Oct. 92, p757-775.

Decision Support System for Crop Planning during Droughts, H. Raman, S. Mohan and N. C. V. Ranga-charya, IR Mar./Apr. 92, p229-241.

Equation for Evaporation Pan to Evapotranspiration Conversions, Richard L. Snyder, IR Nov./Dec. 92,

Equivalent Kostiakov Parameters for SCS Infiltration Families, Subramania Iyer Sritharan, IR Jan./Feb. 92, p192-197.

Evapotranspiration in Sudan Gezira Irrigation Scheme, Ahmed S. A. Hussein and Ahmed K. El Daw, IR Nov. J Dec. 89, p1018-1033.

Flow Capacity through Wide and Submerged Vegetal Channels, M. W. Abdelsalam, A. F. Khattab, A. A. Khalifa and M. F. Bakry, IR Sept./Oct. 92, p724-732.

High Frequency Basin Irrigation Design for Upland Crops in Rice Lands, George J. Moridis and Manuel Alagcan, IR July/Aug. 92, p564-583.

Alagean, IR Juy/Aug. 92, p304-383.
An Interagency Program to Improve Irrigated Agriculture, A. R. Dedrick, W. Clyma, A. J. Clemmens, R. D. Gibson, J. A. Replogle, R. E. Ware, P. N. Wilson and D. B. Levine, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600.

Introduction to Remote Sensing for Irrigation and Drainage, Edwin T. Engman and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p529-534. Irrigation and Drainage—Systems Policy Analysis and India Case Study, Mahesh C. Chaturvedi, WR July/Aug. 92, p445-464. Irrigation, Drainage, and Landscaping for Expansive Soil, Robert W. Day, IR Mar/Apr. 92, p28-590. Irrigation Land Management Model, Roy A. Steiner and Andrew A. Keller, IR Nov/Dec. 92, p928-942. Irrigation Project Modernization, H. Plusquellec and C. M. Burt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p197-202.

Irrigation Uniformity Relationships for Irrigation System Management, Albert J. Clemmens, IR Sept./Oct. 91, p682-699.

po82-oy9.

Momentum Model of Flow Past Weir, Amruthur S. Ramsmurthy, Ngoc-Diep Vo and German Vera, IR Nov/Dec. 92, p988-994.

Operation of Large Multireservoir Systems Using Optimal-Control Theory, Numan R. Mizyed, Jim C. Loftis and Darrell G. Fontane, WR July/Aug. 92, p371-387.

Overseas Perspectives for Managing Irrigation Drainage in California, Emery M. Roe, IR May/June 91, p350-360.

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojas and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p158-163.

Problems and Potential of Irrigated Agriculture in Sub-Saharan Africa, Mahmood Alam, IR Mar/Apr. 91, a165-173.

p155-172.

p155-172.
Promoting Private Irrigation Development: The Irrigation Sector Program Experience in Nepal, Richard Reidinger and Upendra Gautam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p221-226.
Reclaimed Water, Irrigation, and Conservation Pricing, Ronald E. Young, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p161-162.
Rehabilitating Irrigation Systems from the 20th Communication of the Com

p101-102.

Rehabilitating Irrigation Systems from the 20th Century for the 21st Century, Gary L. Parker, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p281-285.

Reuse Simulation in Irrigated River Basin, L. K. Smedema, W. Wolters and F. J. Hoogenboom, IR Nov/Dec.

92, p841-851.

92, p841-851.
Simulation of Two Approaches to Curb Potential Buildup of Nitrates in Groundwater, D. Adelman, S. Zheng and M. F. Dahab, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p611-616.
6 eSt. Venant Modelling in the Irrigation Environment, Ehab A. Meselhe and Forrest M. Holly, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1124-1129.
Stochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/Aug. 92, p527-542.

Slochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/ Aug. 92, p527-542.
 Surface and Subsurface Drainage of Metropolitan City in Arid Zone, Achi M. Ishaq, IR Jan/Feb. 92, p19-35.
 Transients in Canal Network, Rajeev Misra, K. Sridharan and M. S. Mohan Kumar, IR Sepl./Oct. 92, p690-707.
 Using GiS To Locate Salinity on Irrigated Soils, Dennis L. Corwin, Mark Sorensen and James D. Rhoades, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p468-475.
 Water Availability and Water Demand Study for the Citanduy River Basin, West and Central Java, Indonesia, R. Joseph Bergquist and Ed A. Toms, (Water Resource-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p328-331.
 Water Quantity and Quality for Irrigated Agriculture and Wetlands, E. P. Chambers and J. C. Guitjens, (Irrigation and Drainage: Saving a Threatened Resource—in Search of Solutions, Ted Engman, ed., 1992), p431-436.
 Water-Balance Model of Two Conservancies in Guyana, J. de Beer and L. Bacchus, IR July/Aug. 92, p513-519.

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ssues in Developing Control Zones for International Space Operations, Blair A. Nader and Kumar Krishen, AS Oct. 92, p387-404.

AS Oct. 24, p.30 (1992).

International development
ASCE Sponsors Fifth International Civil Engineering Round Table, NE Nov. 92, p15.

Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992, 0-87262-898-1, 127pp.

Internationalization of Engineering Professions, N. D.

Birrell, (Civil Engineering in the Oceans V, Robert T.

Hudspeth, ed., 1992), p983-1005.

Currence Perspectives for Managing Irrigation Drainage

Overseas Perspectives for Managing Irrigation Drainage in California, Emery M. Roe, IR May/June 91, p350-

Tunnelers Tackle NAFTA Markets, Privatization, CE Dec. 92, p18-19.

Water Conference Takes International Focus, CE Nov. 92, p26-27.

Benefits of International Technical Collaboration, Thomas H. Isaacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32.

Critical Issues for Engineering Managers, Delon Hampton, ME July 92, p235-242.

Engineering Ethics in A Multicultural Global Economy, Richard H. McCuen, El July 91, p258-266.

Richard H. McCuen, El July 91, p.258-266.
Improving International Competitiveness, Robert C. West, El Apr. 92, p.107-112.
An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Century: Beyond Engleberg, Richard R. Powell, Edwyn James and Alfred Wohlpart, (High Level Radioactive Waste Management Program Committee, 1992), p.1494-1498.

Sassues in Developing Control Zones for International Insulation.

Issues in Developing Control Zones for International Space Operations, Blair A. Nader and Kumar Krishen, AS Oct. 92, p387-404.

AS Oct. 92, p.387-404.

Professionalism, Enno Koehn, El Jan. 92, p49-55.
Salvage Law for Outer Space, Wayne N. White, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), 9511-516.

Understanding Nuclear Waste Management Within a Global Framework, R. R. Powell, M. Robinson and W. Pankratius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1465-1469.

U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, Frank N. Schubert, CO Sept. 91, p445-459.

Water Data of the International Boundary and Water Commission, Conrad G. Keyes, Jr. and Kenneth N. Rakestraw, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ened Resource-In Sed., 1992), p584-589.

Interpotation
Low-Order Interpolation Functions for Curved Beams, S.
J. Pantazopoulou, EM Feb. 92, p329-350.
Numerical Differentiation Using Gaussian Quadrature,
B. L. Ly, EM Nov. 90, p2568-2572.
Spline Interpolations for Water Hammer Analysis, I. A.
Sibetheros, E. R. Holley and J. M. Branski, HY Oct. 91, p1332-1351.

Developing Protocols for Motor Vehicle Air Quality Modeling, Peter H. Guldberg, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p.306-314.

p.300-314. Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, Guido Schattanek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.315-326. Intersection Air Quality Analysis, John Zamurs, Robert Conway and Stephen S. Rosen, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.325-326.

Modeling Guideline for Air Quality Analysis of Intersec-tions, George J. Schewe, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p298-305.

Interstate nagaways interstate Route 10, August 1990), William M. King. Ir., William H. Temple and Steven L. Cumbaa, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9353-362.

The Evolution of an Environmental Monitor, Peter J. Dodds and R. Scott Sternberger, CE June 92, p56-58. The Heartbeat of the Artery, David L. Druss and Burton P. Kassap, CE Jan. 92, p44-46.

Interurban travel
TRB Reports Weigh New Transport Technologies, CE
Feb. 92, p20.

Source Control of Intrusions Along Horizontal Boundary, J. Bühler, S. J. Wright and Y. Kim, HY Mar. 92, p442-

Inventories

A Comparison of Radionuclide Inventories Between the Direct-Disposal and the Acinide-Burning Cycles, Joneshan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1381-1386.

Combined Resed Site Information Management at Handley Reseducing Research Reseducing Research Reseducing Research Reseducing Research Reseducing Research Research Reseducing Research R

Graphics-Based Site Information Management at Han-ford TRU Burial Grounds, Samuel R. Rod, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

p450-457.

A Probabilistic Regional Damage Estimation Model for Earthquake Occurrences, Dimitris Rentzis, Anne S. Kiremidjian and Craig Howard, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24.

Using Geographic Information Systems for Traffic Control Inventory Management, Gary S. Spring, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1-8.

Investment return analysis
Alliance Promotes Infrastructure Investment (ltr), Ellis S.
Vieser, CE Sept. 92, p38.

Construction Jobs Lurk Underground, CE Aug. 92, p8 Container Terminal Planning: 2001, James E. Davis, (Ports '92, David Torseth, ed., 1992), p15-28.

lon exchange
Brackish Groundwater Desalting in Southern California.
A Summary of Case Studies, Lee A. Jacobi, Julius Y.
Ma and William R. Everest, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p587-592.

Effect of Solid-Phase Selectivity on Sorption of Cobalt and Strontium by Zeolitized Tuff, M. Gopala Rao, P. C. Das, E. U. Honga and A. E. Helou, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Management p1587-1592.

Recovery of Metals from Water Using Ion Exchange, Thomas A. Hickey and David K. Stevens, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515.

Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, Zhihuai Xue, Zhongling Hua, Qi Li and Naiyi Yao, (Environmental Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p.376-381.

Evaluations of Glass Vitrification Techniques on Iron Ratio Determinations, R. B. Spencer, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p2399-2405

p.2399-2403.
Production of Lunar Oxygen, Iron, Magnesium, and Silicon by Aqueous Hydrofluoric Acid Leaching, William N. Agosto, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p678-689.

Planning Simulation Model of Irrigation District, Jesús Chávez-Morales, Miguel A. Mariño and Eduardo A. Holzapfel, IR Jan./Feb. 92, p74-87.

Irrigation efficiency

Constant Hole-Spacing Trail Tubes, S. T. Chu and H. M. Bagherzadeh, IR Jan./Feb. 92, p166-178. Evapotranspiration in Sudan Gezira Irrigation Scheme, Ahmed S. A. Hussein and Ahmed K. El Daw, IR Nov./ Dec. 89, p1018-1033.

Field-Measured Hydraulic Resistance Characteristics in Vegetation-Infested Canals, Mohamed F. Bakry, Timo-thy K. Gates and Ahmed F. Khattab, IR Mar./Apr. 92, p256-274.

Greenhouse Irrigation Technology Transfer in Spain, Elias Fereres, Francisco Orgaz, Nicolas Castilla and Jose Lopez, (Irrigation and Drainage: Saving a Threat-ende Resource—In Search of Solutions, Ted Engman, ed., 1992), p215-220.

Irrigation Land Management Model, Roy A. Steiner and Andrew A. Keller, IR Nov./Dec. 92, p928-942. Optimization Model for Alternative Use of Different Quality Irrigation Waters, Javaid Afzal, David H. Noble and E. K. Weatherhead, IR Mar./Apr. 92, p218-

228.
Rational Approach for Modifying Rotational Water De-livery Schedule, Sanjay Bhirud, N. K. Tyagi and C. S. Jaiswal, IR Sept/Oct. 90, p632-644.
Transient Hydraulic Model for Simulating Canal-Network Operation, F. N. Gichuki, W. R. Walker and G. P. Merkley, IR Jan/Feb. 90, p67-82.

Working Conditions of Sprinkler to Optimize Applica-tion of Water, José Marí Tarjuelo Martín-Benito, Manuel Valiente Gómez and Juan Lozoya Pardo, IR Nov./Dec. 92, p895-913.

Irrigation engineering Identification of Control System for Canal with Night Storage, Wytze Schuurmans, Robert Brouwer and Peter Wonink, IR May/June 92, p360-369.

Interpretation of Kostiakov Infiltration Parameters Borders, D. M. Hartley, IR Jan./Feb. 92, p156-165.

Irrigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992, 0-87262-877-9, 634pp.

Irrigation practices

Irrigation practices
Economical and Statistical Based On-Farm Irrigation
Scheduling, L. Niel Allen, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p146-151.
Greenhouse Irrigation Technology Transfer in Spain,
Elias Fereres, Francisco Orgaz, Nicolas Castilla and
Jose Lopez, (Irrigation and Drainage: Saving a Threatende Resource—In Search of Solutions, Ted Engman,
ed., 1992), p215-220.
Importance of ET on Colorado, Biver, Water, Quality,

Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p171-176.

man, ed., 1992), p171-176.

Irrigation and Drainage—Systems Policy Analysis and India Case Study, Mahesh C. Chaturvedi, WR July/Aug. 92, p445-464.

Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monsoon Climate of Tamil Nadu, India, Charles Rodgers and Mark Svendsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347.

Planning Simulation Model of Irrigation District, Jesús Chávez-Morales, Miguel A. Mariño and Eduardo A. Holzapfel, IR Jan/Feb. 92, p74-87.

Holzapfel, IR Jan./Feb. 92, p74-87.
Rehabilitating Irrigation Systems from the 20th Century for the 21st Century, Gary L. Parker, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p281-285.
Rehabilitating Irrigation Systems with USDA Water Quality Programs, John D. Hedlund, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293.

Irrigation programs

Holistic Approach to Irrigation Management in Develop-ing Countries, Phillip Z. Kirpich, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p263-268.

Problems and Potential of Irrigated Agriculture in Sub-Saharan Africa, Mahmood Alam, IR Mar./Apr. 91, p155-172.

p153-172.
p153-172.
Promoting Private Irrigation Development: The Irrigation Sector Program Experience in Nepal, Richard Reidinger and Upendra Gautam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p221-226.
Technology Transfer for Projects in South America, Joseph B. Summers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p209-214.

Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p209-214.

Irrigation scheduling

Case Studies of Semi-Closed Pipeline Systems for Flexible Deliveries, John L. Merriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p468-473.

Combined Allocation and Operation Model, Wytze Schuurmans and Wil N. M. van der Krogt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p269-274.

Economical and Statistical Based On-Farm Irrigation Scheduling, L. Niel Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p146-151.

ETBC: Interactive Software for Blaney-Criddle Estimates of Evapotranspiration, Ronald L. Elliott, Eldon L. Johns and Paul A. Weghorst, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-139.

Evapotranspiration Data Management in California, R. L. Snyder and W. O. Pruitt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-131.

Irrigation Timing for Wheat Based on Climate, Crop, and Soil Data, R. P. Tripathi, IR May/June 92, p370-381.

Modeling Irrigation Schedules for Lowland Rice with Stochastic Rainfall, ARab H. Azhar, V. V. N. Murty and H. N. Phien, IR Jan./Feb. 92, p36-55.

Rational Approach for Modifying Rotational Water Delivery Schedule, Sanjay Bhirud, N. K. Tyagi and C. S. Jaiswal, IR Sept./Oct. 90, p632-644.

Use of Pilot Projects for Technology Transfer in Developing Countries, John L. Merriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-243.

Irrigation systems
Combined Allocation and Operation Model, Wytze

tions, Ted Engman, ed., 1992), p238-243.

Irrigation systems
Combined Allocation and Operation Model, Wytze Schuurmans and Wil N. M. van der Krogt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p269-274.
Constant Hole-Spacing Trail Tubes, S. T. Chu and H. M. Bagherradeh, IR, Ian./Feb. 92, p166-178.

Design of Control Algorithm for Operation of Irrigation Canals, J. Mohan Reddy, Amadou Dia and Ahmed Oussou, IR Nov/Dec. 92, p852-867.

Design of Irrigation Distribution System, Steve Robertson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p462-467.

1992), p462-467.
Feedback Control of Basin-Irrigation System, A. J. Clemmens, IR May/June 92, p480-496.
Irrigation and Drainage System As-Built Map Preparation Using Satellite Digital Imagery and a GIS, Christopher M. U. Neale and Lymann S. Willardson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p311-316.
Irrigation Land Management Model, Roy A. Steiner and Andrew A. Keller, IR Nov./Dec. 92, p928-942.
Optimal Irrigation Delivery System Design under Uncertainty, Timothy K. Gates, Abdulmohsen A. Alshaikh, Samir I. Ahmed and David J. Molden, IR May/June 92, p433-449.
Optimization Model for Alternative University of the Stephen Ste

Optimization Model for Alternative Use of Different Quality Irrigation Waters, Javaid Afzal, David H. Noble and E. K. Weatherhead, IR Mar./Apr. 92, p218-

228. Participative Process in Tube Well Irrigation Development, Manuel Olin, IR Nov./Dec. 92, p882-894.
Planning for Water Conservation Through Irrigation System Modernization and Rehabilistion, A. K. Dimmitt, K. I. McLaughlin, F. Z. Kamand and D. G. Welch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299.

Rehabilitating Irrigation Systems with USDA Water Quality Programs, John D. Hedlund, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293.

Solutions, Ted Engman, ed., 1992), p286-293.

Role of Land Information System in Operation and Maintenance of Irrigation Systems Bureau of Reclamation, James B. Robertson and Sharen L. Wood, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p317-322.

Stochastic Simulation and Optimization of Irrigation Canal Network Flows, Timothy K. Gates, Abdelmohsen A. Alshaikh and Samir I. Ahmed, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p474-480.

Technology Transfer Lessons from a U.S. Water District.

Technology Transfer Lessons from a U.S. Water District, Douglas Welch and Karen McLaughlin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1922), p203-208.

Irrigation water

Deformation of Fill Slopes Caused by Wetting, Iraj Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257

Design and Operation of On-Farm Irrigation Ponds, Bri-jesh Kumar Mehta and Akira Goto, IR Sept./Oct. 92,

p659-673.

Greenhouse Irrigation Technology Transfer in Spain, Elias Fereres, Francisco Orgaz, Nicolas Castilla and Jose Lopez, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p215-220.

Irrigation Uniformity Relationships for Irrigation System Management, Albert J. Clemmens, IR Sept./Oct. 91, p682-699.

Access Control to Projects Via Raised Islands, Justin F. Farmer, (Sile Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p77-81.

and I. C. Sutaria, ed., 1992), p77-81.

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066.

Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A. Evans and Robert Blama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-335.

Wave Forecasting for Construction in Mobile Bay, Scott L. Douglass, William W. Schroeder and John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p713-727.

Dynamic Analysis of Sliding Seismic Isolators, Navin-chandra Amin, Anoop Mokha, Stanley Low and Victor Zayas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p320-323.

Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Hsu and Apostolos Fafitis, ST Sept. 92, p2459-2474.

Seismic Fuse Does Double Duty in Arizona, CE Mar. 92, p88.

Borosilicate Glass (a,n) Sources Used With Origen-Type Calculations, O.W. Hermann and R. Salmon, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1272-1280.

1992), p1272-1280.
Isotopic Separation of <sup>3</sup>He/<sup>4</sup>He From Solar Wind Gases Evolved from the Lunar Regolith, William R. Wilkes and Layton J. Wittenberg, Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.
ORIGNATE: PC Input Processor for ORIGEN-S, Stephen M. Bowman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p88-92.

Paleohydrologic Implications of the Stable Isotopic Composition of Secondary Calcite Within the Tertiary Volcanic Rocks of Yucca Mountain, Nevada, Joseph F. Whelan and John S. Stuckless, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581. Radioelements and Their Occurrence with Secondary Minerals in Heated and Unheated Tuff at the Nevada Test Site, S. Flexser and H. A. Wollenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1593-1598.

p1593-1598.

The Role of ORIGEN-S in the Design of Burnup Credit Spent Fuel Casks, M. C. Brady, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p65-

Strontium Isotope Geochemistry of Calcite Fracture Fil-lings in Deep Core, Yucca Mountain, Nevada—A Pro-gress Report, Z. E. Peterman, J. S. Stuckless, B. D. Marshall, S. A. Mahan and K. Futa, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pd. 1523-1587. p1582-1586.

Inotropic material

An Elasticity Solution for a Transversely Isotropic Material Containing a Spherical Shell Under Arbitrary Axisymmetric Loading, J. -Y. Wang and S. M. Heinrich, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p. 1902-0 1023.

Shape Ontimization in Plate Buckling.

Mechanics of Shape Optimization in Plate Buckling, Mahesh D. Pandey and Archibald N. Sherbourne, EM June 92, p1249-1266.

Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200.

Computer Iterative Technique for Soil-Structure Interac-tion, Rusk Masih, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p418-425.

Extended Kalman Filter-Finite Element for Geotechnical Problems, Masaru Hoshiya and Atsushi Sutoh, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p128-131.

The Hopscotch Algorithm for Three-Dimensional Simulation, Geneviève Ségol, HY Mar. 92, p385-406.

A New Methodology for Repository Site Suitability Eval-uation, Ian Miller, Richard Kossik and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p494-501.

Nonlinear Analysis of Steel Space Structures, Ram Chan-dra, D. N. Trikha and Prem Krishna, ST Apr. 90, p898-909.

Japan Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-

CERF Draws Construction Lessons from Japan, CE Mar. 92, p26-27.

92, p26-27.

Corrosion Lifetime Assessment for Candidate Materials of Geological Disposal Overpack for High-Level Nuclear Waste Canisters—Perspective of R&D in Japan, Hidekazu Asano, Hisao Wakamatsu and Masatsune Akashi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1658-1669.

Current Chemical Grout Engineering in Japan, Ryozo Yonekura and Munehiko Kaga, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-

Development of a Gas-Liquid Reaction Injection System, Shunsuke Shimada, Masanori Ide and Hiromu Iwase, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p325-336.

Education and Research in Japan's Construction Indus-try, Antonio Nanni, Hikaru Takeuchi and Kazuhisa Yahagi, El July 92, p284-293.

Full Scale Application of Active Bracing Systems, M. A. Riley, A. M. Reinhorn and T. T. Soong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p816-819.

The High Level Radioactive Waste Management Program in Japan, Ajij Yamato, Sumio Masuda and Hideki Sakuma, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p41-48.

Japan Leads World in IVHS Progress, CE Jan. 92, p25-1888 (R. R. D. Stocker Stockers)

Japan's R&D Success Story: Report Tells How They Do It, NE Jan. 92, p3. Multibillion-Dollar Resort Planned for Japan, CE Mar.

92, p29,

92, p.29.
Numerical Modeling of Flow and Transport Phenomena in a Fractured Rock and Its Calibration Process, A. Kobayashi, R. Yamashita and Y. Moro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e605-701. p695-703.

Settling Down Easy, Charles R. Heidengren, CE Dec. 92, p72-74.

Underground Research: Here and There, Raymond L. Sterling, CE Dec. 92, p56-58.

Jet diffusion Scour Downstream of Grade-Control Structures, Noel E. Bormann and Pierre Y. Julien, HY May 91, p579-594.

Jet grouting
Current Chemical Grout Engineering in Japan, Ryozo
Yonekura and Munehiko Kaga, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-

Grouting Improvement of Foundation Soils, Francesco Gallavresi, Grouting. Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1-38.

- Ilan Juran, ed., 1992), p1-38.
  Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-261.
  Jet Grouting for a Self-standing Wall, Gohichi Miyasaka, Yutaka Sasaki, Toshiaki Nagata, Mitsuhiro Shibazaki, Masahiro Iji and Masami Yoda, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p144-155.
- Jet Grouting in Airport Construction, Yoshiomi Ichihashi, Mitsuhiro Shibazaki, Hiroaki Kubo, Masahiro Ji and Akira Mori, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193. Jet Grouting in Contaminated Soils, Herff N. Gazaway and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193. Jet Grouting State-of-the-Practice, J. L. Kauschinger, E. B. Perry and R. Hankour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p169-181. Methods to Estimate Composition of Jet Grout Bodies, L. Joseph Kauschinger, Rachid Hankour and E. B. Perry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p194-205. Mining for Building Expansion, Richard M. Croswell,

1992), p194-205.
Mining for Building Expansion, Richard M. Croswell, Robin B. Dill and John Booth, CE Dec. 92, p48-51.
Minipile Milestone in Memphis, Loren D. Flick, A. E. "Ted" Graham, Michael J. Marasa, Nigel B. R. Osborn and Frank T. Tobey, III., CE Sept. 92, p46-49.
Recent European Developments in Constructing Grouted Slabs, Norbert Tausch, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p301-312.
The Role of Soil Modification in Environmental Engi-

Holtz, ed. and Ilan Juran, ed., 1992), p301-312.
The Role of Soil Modification in Environmental Engineering Applications, James K. Mitchell and Wade A. Van Court, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p110-143.
Soilcrete Cut-Off Wall for Undercrossing a Busy Rail Line, Walter Steiner, Ernst Schneider and Manfred Cartus, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p384-397.

Stabilization of Pier Foundation Using Jet Grouting Techniques, R. Parry-Davies, R. M. H. Bruin, G. War-dle and M. G. Nixon, (*Grouting, Soil Improvement and* Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 56-168. Use of Cement-Bentonite for Cutoff Wall Construction, B. L. Kilpatrick and S. J. Garner, (*Grouting, Soil Im-*provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p803-815.

Jets
Experimental Characterization of Jet Forces on Waste
Tank Components, Judith Ann Bamberger, James M.
Bates and E. Dale Waters, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p628-635.
Head Losses in Storm Sewer Manholes: Submerged Jet
Theory, Flemming Bo Pedersen and Ole Mark, HV
Nov. 90, p1317-1328.
Similarity Solutions of Starting Jets and Starting Plumes,
Vincent H. Chu, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p600603.

603.
Turbulence, and Energy Loss, at Combining Pipe Junctions, Marc Serre and A. Jacob Odgaard, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p389-392.
Use of Machine Vision in Bedform Studies, Peter A. Mantz and Wenxue Li, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p840-845.

Jetties

Jetties
Application of Extremely Low Altitude Photogrammetry for Monitoring Coastal Structures, Richard B. Davis and Thomas R. Kendall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), 892-897.
Concrete for Sealing Voids in Rubble Structures, D. P. Simpson, B. D. Neeley and D. M. Walley, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p847-861.
Design and Construction of Chicago, 1992, 1993

Design and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p354-570.

Effect of Jetty Configuration on Wave Conditions and Dredge Quantities at Green Harbor, MA, Cheryl E. Burke, Joan Pope and Mary A. Cialone, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p462-478.

p462-478.
An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536.
Harbour Development in Southern Part of Thailand, Sutat Weesskul, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369.
Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1055-1068.
Sour Hole Development and Stabilization at Skipnescok.

p1055-1068.

Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-hsi Chu and Gilbert K. Nersesian, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.

South Jetty Sour Hole Stabilization, Ocean City, Maryland, Gregory P. Bass and Edward T. Fulford, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p583-397.

p363-397.
Sylvan Beach Pier Rehabilitation Study, Peter W. Soltys, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662.
The Talbert Channel Ocean Outlet Project, Craig B. Leidersdorf, Kenneth E. Smith and Ruh-Ming Li, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p745-761.

Johnson, Alfred E.

Alf Johnson, Interstate Highway Pioneer, Dead at 84, NE June 92, p5.

Joint scalants

Forensic Analysis of a Two-Component Joint Sealant Using FTIR-ATR, Laurand H. Lewandowski, Larry N. Lynch and Rogers Graham, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p53-65.

Forensic Analysis Techniques for Joint Sealants, Rogers T. Graham and Larry N. Lynch, (Materials: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p404-414.

Joint ventures

Managing and Motivating People on a Joint Venture Project, J. Daniel Carrier, ME Oct. 92, p362-366.

Applications of Viscoelastic Damper to Jointed Struc-tures for Seismie Mitigation, C. S. Tsai and H. H. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p685-688.

M. NIGULWECKI, CU., 1992), pp63-088.
Classification of Jointed Rock with Emphasis on Grouting, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p449-460.

Computer Simulated Flow of Grouts in Jointed Rock, Lars Hissler, Ulf Håkansson and Håkan Stille, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p461-473.

1992), p401-4/3. Hydraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rice, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-

Use of Shi's Discontinuous Deformation Analysis on Rock Slope Problems, Man-chu Ronald Yeung and Richard E. Goodman, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p461-478.

Analysis and Design of Doweled Slab-on-Grade Pave-ment Systems, Anastasios M. Ioannides and George T. Korovesis, TE Nov./Dec. 92, p745-768.

Analysis and Implementation of Thin-Layer Element for Interfaces and Joints, K. G. Sharma and C. S. Desai, EM Dec. 92, p2442-2462.

Analysis of Space Crane Articulated-Truss Joints, K. Chauncey Wu and Thomas R. Sutter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p320-331.

Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-

Confinement Steel Requirements for Connections in Ductile Frames, M. R. Ehsani and J. K. Wight, ST Mar. 90, p751-767.

Mar. 90, p751-767. Effect of Contraction Joints on Earthquake Response of Arch Dam, Gregory L. Fenves, Soheil Mojtahedi and Richard B. Reimer, ST Apr. 22, p1039-1055. Flawed Assumptions: Why Bridge Deck Joints Fail, Martin P. Burke, Jr., CE Nov. 91, p60-62. Modeling Load-Slip Behavior of Naited Joints, Ruy A. Sa Ribeiro and Patrick J. Pellicane, MT Nov. 92, p385-

Nonlinear Modeling of Truss-Plate Joints, Leslie Groom and Anton Polensek, ST Sept. 92, p2514-2531.

auto Anion Folensek, S1 Sept. 92, p2514-2531. Performance of Upper Stillwater Dam, Alan T. Richardson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p148-161. Reliability of Bolted Wood Connections, John J. Zahn, ST Dec. 92, p3362-3376.

Seismic Behavior and Shear Strength of Framed Joint Using Steel-Fiber Reinforced Concrete, Jiuru Tang, Chaobin Hu, Kaijian Yang and Yongcheng Yan, ST Feb. 22, p341-338.

Seismic Panel Zone Design Effect on Elastic Story Drift in Steel Frames, Keh-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

ST Dec. 90, p.265-3011.
Structural Characterization of an Articulated-Truss Joint, Thomas R. Sutter, K. Chauncey Wu, Kevin T. Riutort, Joseph B. Laufer and James E. Phelps, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.296-307.

Joints, bolted
Cyclic Behavior of Extended End-Plate Joints, Ahmed Ghobarah, Robert M. Korol and Ashraf Osman, ST May 92, pl 333-1353.

Effective Strength of 'Square-and-Diagnonal' Double-Layer Grid, Toshitsugu Saka and Yoshiya Taniguchi, ST Jan. 92, p52-72.

Joints, bonded
Adhesives and Structural Plastics, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571.
Stress Relaxation Analysis for Sealants, Chi-Ping Wang and Frank E. Weisgerber, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p240-243.

Manufactured Wood Joists—Noncollapse Failure, Theo-dore G. Padgett, Jr., CF Feb. 92, p58-64.

Accessibility of Public Services in Irbid, Jordan, Khaled Al-Sahili and Mohammad Aboul-Ella, UP Mar. 92. p1-12.

p1-12.

Jurisdiction

Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, Carl B. Ellis and Cindy L. Rogers, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p207-2211.

Nuclear Waste Repository Program Oversight: Strategies of the Situs Jurisdiction, Phillip A. Niedzielski-Eichner and Elgie Holstein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1927-1937.

Adaptive Parameter Estimation for Multisite Hydrologic Forecasting, Haitham M. Awwad and Juan B. Valdes, HY Sept. 92, p1201-1221.

HY Sept. 92, p1.201-1221. Extended Kalman Filter-Finite Element for Geotechnical Problems, Masaru Hoshiya and Atsushi Sutoh, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p128-131. Integrated GPS-INS for High-Accuracy Road Positioning, M. E. Cannon, SU Nov. 92, p103-17.

Updating of Dynamic Structural Systems by Learning, Masaru Hoshiya, Yasuyoshi Obuchi and Shigeru Noda, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p124-127.

Kansas City Section Starts its 70th Year, CE Feb. 92, p73. Water Reuse to Gain Water Rights for Hays, Kansas, H.
Wayne Gresh and Jeffrey W. Henson, (Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p55-60.

Phenol Removal from Kaolinite by Electrokinetics, Yal-cin B. Acar, Heyi Li and Robert J. Gale, GT Nov. 92, p1837-1852.

Seepage Control in Kaolinite Clay with Simulated Cracks, C. Vipulanandan and M. Leung, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1054-1066.

Kerst

Karst

Exploration/Grouting in Cambro-Ordovician Karst, Joseph A. Fischer, Richard W. Greene, Joseph J. Fischer and Frank W. Gregory, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p350-359.

Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p791-802.

Kentucky

Tomorrow's Schools, Socrates Ioannides and Robert P. Beall, CE Jan. 92, p56-58.

Kinematic wave theory
Design Discharge for Urban Stormwater Drainage, A.
Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p713-718.

Experiments with Wind Effects on Pavement Runoff, Jo-seph R. Reed, David F. Kibler and George Krallis, (H)-draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.

Fractal Concept Used in Time-of-Concentration Esti-mates, Gert Aron, James E. Ball and Thomas A. Smith, IR Sept./Oct. 91, p635-641. Kinematic Wave Controversy, Victor M. Ponce, HY Apr. 91, p511-525.

91, p311-325.

Kinematics
Component Wave Interactions and Irregular Wave Kinematics, Jun Zhang, Robert E. Randall and C. Anthony Spell, WW July/Aug. 92, p401-416.
Integrated GPS-INS for High-Accuracy Road Positioning, M. E. Cannon, SU Nov. 92, p103-117.
Intermittent Kinematics for Nonlinear Random Waves Near Ocean Surface, Sau-Lon James Hu and Dongsheng Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p91-94

94.
Kinematics of 2-D Transient Water Waves Using Laser
Doppler Anemometry, Cheung H. Kim, Robert E. Randall, Sung Y. Boo and Martin J. Krafft, WW Mar/Apr.
92, p147-165.
Kinematics of Nonlinear Random Waves near Free Surface, Sau-Lon James Hu and Dongsheng Zhao, EM
Oct. 92, p2072-2086.

face, Sau-Lon James Hu and Dongsheng Zhao, EM Oct. 92, p2072-2086.

A Numerical Study of Kinematics of Nonlinear Water Waves in Three Dimensions, Hongbo Xü and Dick K. P. Yue, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p81-98.

Recent Wave Kinematics Experimental Studies, R. E. Randall, J. Zhang, C. A. Spell and J. K. Longridge, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p60-621.

Sea Floor Wave-Induced Water Kinematics for Design of Pipeline, Leon Borgman and Robert Hudspeth, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p444-466.

The SIMBAT Software Package for Stochastic Interpolation of Ocean Wave Kinematics as an Aid in the Engineering Design of Large Floating Structures, Leon Borgman, David Shields, Robert Zueck and Warren Bartel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p585-606.

Soil Nailing: A Simplified Kinematic Analysis, R. John Byrne, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p751-764.

Stability Analysis in Geomechanics by Linear Programming. II: Application, Poon-Hwei Chuang, GT Nov.

Stability Analysis in Geomechanics by Linear Programming. I: Formulation, Poon-Hwei Chuang, GT Nov. 92, p1696-1715.

Stability of Systems of Rigid Bodies by Bounding Theorems, Thomas E. Boothby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p904-907.

Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200.

Kinetics
A Computational Berthing Model for the Design of Fender Systems, John R. Headland, (Ports '92, David Torseth, ed., 1992), p480-492.
Computer Simulation of Granular Flows, Thomas G. Drake, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p752-755.
Electrokinetic Cleanups, Yalcin B. Acar, CE Oct. 92, p58-60.
Insect Centers on Compic Dust, Do Description.

pos-ou.

Impact Craters on Cosmic Dust: Do Damage to the Spacecraft, Hanchang Peng. (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p969-

974.
Oxidation of Bromide by Hypochlorous Acid in Aqueous Solutions: Stoichiometry and Kinetics, N. Phillip and V. Diyamandoglu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p634-639.
Thermodynamic Model of Nitrification Kinetics, Thongchai Yantarasri, Albert Garcia, III. and David Brune, EE July/Aug. 92, p568-584.

Knowledge acquisition
Automated Knowledge Acquisition of Preliminary Design Concepts, Mary Lou Maher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p975-982.

Basic Principles and Techniques in Knowledge Acquisi-tion, Kenneth L. Modesitt, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), pl 1-49. Building KBES for Diagnosing PC Pile With Inductive Learning, Yi-Cherng Ych, Yau-Hwaug Kuo and D. S. Hsu, CP Apr. 92, p200-219.

Seneration of Examples for Training a Learning Design System, Yoram Reich, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p999-1006.

p999-1006.
In Search of Knowledge, Richard Forsyth, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p1-10.
Inductive Learning of Bridge Design Knowledge, Yoram Reich and Steven J. Fenves, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p169-189.
Inductive Learning of Wind Bracing Design for Tall Buildings, Mohamad Mustafa and Tomasz Arciszewski, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p190-203.
Knowledge Acquisition and Development for Formwork

Knowledge Acquisition and Development for Formwork Selection System, Awad S. Hanna, Jack H. Willenbrock and Victor E. Sanvido, CO Mar. 92, p179-198.

and Victor E. Sanvido, CU Mar. 92, p.179-198.
Knowledge Acquisition for an Expert System for Handling Customer Inquiries on Water Quality, Richard M. Males, Judith A. Coyle, Walter M. Grayman, Robert M. Clark, Harry J. Borchers and Beth G. Hertz, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p.105-123. p105-123.

Knowledge Acquisition for Postearthquake Usability Decisions, Zahra-El-Hayat Tazir, Tommaso Pagnoni and Carlo Gavarini, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p147-168.

Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992, 0-87262-864-7, 232pp.

87262-864-7, 232p.

Knowledge Representation: An Overview, Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p1-14.

Learning Rules for Driving Scenarios for an Urban Rail Corridor with Closely Spaced Stations, S. Khasnabis, T. Arciszewski and S. Khurshidul Hods, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p983-990.

Machine Learning in Knowledge Acquisition, Tomasz.

Machine Learning in Knowledge Acquisition, Tomasz Arciszewski and Wojciech Ziarko, (Knowledge Acquisi-tion in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p50-68.

Lewis A. Rossman, ed., 1992), p30-68.
Machine Learning in Planning and Control, Shaopei Lin, Zhenyi Zhao and Yingjian Soong, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p991-998.
Text and Reference Books on Knowledge Acquisition and Machine Learning, Yoram Reich, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p204-214.

Knowledge-based systems

Application of Neural Network to Groundwater Remediation, J. H. Garrett, Jr., S. Ranjithan and J. W. Eheart, Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p239-267.

Automated Knowledge Acquisition of Preliminary Design Concepts, Mary Lou Maher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p975-982.

Basic Principles and Techniques in Knowledge Acquisi-tion, Kenneth L. Modesitt, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), pl.1-49.

A. ROSSMAN, CO., 1792.), p11-49.
Building KBES for Diagnosing PC Pile With Inductive Learning, Yi-Cherng Yeh, Yau-Hwaug Kuo and D. S. Hsu, CP Apr. 92, p200-219.
Constructing Site Layousts using Blackboard Reasoning with Layered Knowledge, Iris D. Tommelein, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p214-258.

A Design Component Library Based on Design Standards, M. Maher Hakim and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p105-112.

Jeff R. Wright, ed., 1992), p103-112.
Design of Tension Leg Platforms: A Knowledge Based Approach, John M. Niedzwecki and Oriol R. Rijken, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p288-293.
The Design/Build Advisor System: Integration of Databases with a Knowledge-Based System, Annette L. Stumpf and Thomas R. Napier, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p950-958.

Expert System for Anaerobic-Digestion-Process Opera-tion, Michael W. Barnett and John F. Andrews, EE Nov/Dec. 92, p949-963.

Expert System for Construction Safety. II: Knowledge Base, Fabian C. Hadipriono, CF Nov. 92, p261-274.

Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992. 0-87262-892-2. 305pp

Externalizing Project-Specific Knowledge in Structural Design, Taufig Rafiq and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 388-393.

Formulation of a Knowledge-Base for Building Design Simulation, Claude Bédard and Mathi Ravi, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1129-1138.

Frame-Based Representation, Mary Lou Maher and Priti Vora, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p60-79.

Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, Catherine D. Perman and Leonard Ortolano, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.

Framework of a Knowledge-Based Estimate Classifica-tion System, Irtishad U. Ahmad and Syed T. Rahman, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p967-974.

Generation of Examples for Training a Learning Design System, Yoram Reich, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p999-1006.

In Search of Knowledge, Richard Forsyth, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p1-10.

Integrated Approaches for Costing Design Alternatives, Guillermo F. Salazar, Stephanie Foulke and Luigi Di-Monaco, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p848-855.

Intelligent Retrieval System for Conditions of Contract Documents in Construction, Ayman A. Morad and Luis Arditi Rocha, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p737-745.

Investigating Hot Mix Asphalt Segregation Causes and Cures: A Knowledge-Based Systems Approach, Maqbool A. Khatri, Sivand Lakmazaheri, E. Ray Brown and Prithvi S. Kandhal, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p317-324.

ITS-CONCRETE: A Functional Description, H. Gordon Thompson, II. and Nelson C. Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p222-228.

Knowledge Acquisition in Civil Engineering, Tomasz Ar-ciszewski, ed. and Lewis A. Rossman, ed., 1992, 0-87262-864-7, 232pp.

A Knowledge Based System with Uncertainty for the Soil, Chérif Boulemia, Daniel Boissier and Jihad Al-Hajjar, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p365-368.

Knowledge Based-Object Oriented Primitive Work Item Generation, Joon Won Lee, Francois Grobler and M. Kevin Parfitt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p95-966. Knowledge Elicitation Strategies and Experiments Applied to Construction, Jesus M. De La Garza and C. William Ibbs, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p69-85. Knowledge Representation: An Overview, Robert H. Allen, (Expert Systems for Overview, Robert H. Allen, ed., 1992), p1-41-68. Knowledge Representation in Water Resource Management Using Prolog and Natural Language, Richard N. Palmer and Lynn Spence, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p144-160. Knowledge Representation With Logic, Deepak Jain, Kincho H. Law and Helmut Krawinkler, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p15-42. Knowledge-Based Advisory System for Public-Sector Design-Build, Anthony D. Songer, C. William Ibbs, James H. Garrett, Thomas R. Napier and Annette L. Stumpf, CP Oct. 92, p456-471.
Knowledge-Based Modeling of Material Behavior with Neural Networks, J. Ghaboussi, J. H. Garrett, Jr. and X. Wu, EM Jan. 91, p132-153.

X. Wu, EM Jan. 9., pl 32-153.

Knowledge-Based Simulation of Construction Plans, Abdalla M. Odeh, Iris D. Tommelein and Robert I. Carr, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 042-1049.

Knowledge-Based System for Design of Signalized Intersections, J. S. Linkenheld, R. F. Benekohal and J. H. Garrett, Jr., TE Mar./Apr. 92, p241-257.

Knowledge-based System for Duration Estimating and Crew Selection for Construction Activities, Ayman A. Morad and Gerardo D. Diaz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p190-198.

meering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p190-198.

Knowledge-Based Systems in Structural Engineering in Germany, Nikolaus Fleischmann and Martina Schnelenbach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p558-565.

Learning Rules for Driving Scenarios for an Urban Rail Corridor with Closely Spaced Stations, S. Khasnabis, T. Arciszewski and S. Khurshidul Hoda, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p983-990.

A Lisp Based Expert System Tool, K. M. Sakr and M. U. Hosain, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p888-895.

Machine Learning in Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski and Wojciech Ziarko, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p50-68.

Neural Networks, J. H. Garrett, Jr., J. Ghaboussi and X. Wu, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p104-143.

Object-Oriented Programming, Walid T. Keirouz, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p104-143.

Oh Knowledge Representation and Knowledge Acquisition in Structural Engineering, Nikolaus Fleischmann and Adam Borkowski, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p402-409.

Rule-Based Representation, Ashim Bose and Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p43-59.

A Rule-Based Representation, Robert H. Allen, ed., 1992), p361-175.

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766. Site Event Advisor: Expert System for Contract Claims, James E. Diekmann and Knut Gjertsen, CP Oct. 92, p472-479.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

Text and Reference Books on Knowledge Acquisition and Machine Learning, Yoram Reich, (Knowledge Acquisition in Crivil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p204-214.

Time Series Prediction Using Neural Networks, James Villarreal and Paul Baffes, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p268-282.

Traffic Signal Using Mixed Controller Operations, S. Manzur Elahi, A. Essam Radwan and K. Michael Goul, TE Nov/Dec. 92, p866-880.

Weather Advisor System for Construction Duration Esti-

TE Nov/Dec. 92, p866-880.

Weather Advisor System for Construction Duration Estimation: Potential of Integrating KBS's and CD-ROM Databases, Diego Echeverry and Moonia P. Kim (Computing in Civil Engineering and Geographic Information Systems Symposium. Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p833-840.

Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, Walid Y. Thabet, Ayman A. Morad and Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p727-736.

mendant, August E. E. Komendant, Structural Engineer, Dies at 85, NE Nov. 92, p5.

Korea
3-D Modelling of Heat Discharge from Ul-Jin Power
Plant into Coastal Waters of Korea East Sea, Young Jae
Ro, Tae In Kim, Ha Keun Sung and Suk Woo Lee, (Estuarine and Coastal Modeling, Malcolm L. Spaulding,
ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p501-512.
Concrete Modules Lead to Instant High-Rise Housing,
CF Mar 92, p10.

CE Mar. 92, p10.

New Seoul Metropolitan Airport, William H. Small, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p155-162.

Response Statistics of Tension Leg Platforms Under Wind Loads, Jun Zhao and Ahsan Kareem, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p921-933.

Mammoth Cleanup for Kuwait's Contaminated Soil, CE Sept. 92, p22,26.

Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p77-90.

Labor

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

p633-650. Effects of Scheduled Overtime on Labor Productivity, H. Randolph Thomas, CO Mar. 92, p66-76. Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726. RCC Dam Construction—A Contractor's View, Jeffrey C. Allen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-226.

Tunneling in the Urban Environment, Norman A. Nadel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p172-180.

abor relations

Labor relations
An Optimization Methodology for Crew Assignment
Based on Maximizing Labor Productivity, John A.
Kuprenas and Anthony D. Songer, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p182-189.

Laboratories

Human Exploration of Mars: The Role of a Mars Outpost

Laboratory, Michael B. Duke, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,

Stein Sture, ed. and Russell J. Miller, ed., 1992), p43-

Perspectives on the Science Advisor Program at Sandia National Laboratories, P. C. Bennett, R. B. Heath, A. Podlesny and P. A. Channon, (High Level Radioactive Waste Management, High Level Radioactive Weste Management Program Committee, 1992), p1826-1831. Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1298-1302.

Analysis of Compressibility of Sensitive Soils, T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

GT Jan. 90, p103-118.
Basic Properties of Sand and Gravel Filters (Paper introduced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p366-383.
Canadian Lab Gets Under Building Skins, CE Oct. 92,

p27. Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29.
Darcy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, IR Jan./Feb. 92, p104-112.
Jarcy-Weisbach Roughness Coefficients for Selected Darcy-Weisbach Roughness Coefficients for Selected

and Gary A. Wieman, IR Jan/Feb. 92, p104-112.

Darcy-Weisbach Roughness Coefficients for Selected Residue Materials, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p481-486.

Design of Socketed Drilled Shafts in Limestone, M. C. McVay, F. C. Townsend and R. C. Williams, GT Oct. 92, p1626-1637.

92, p1626-1637.

Determination of Geotechnical Properties of Uranium Tailings, Antonio Santos, José M. Martínez and Juan Luis Santiago. (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p175-191.

Dracy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p747-752.

Dynamic Response of Sand Bairformad with Nandal Polymanic Response of Sandal Pairformad with Nandal Pairformad with

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

Effect of Spoilers on Scour at Submarine Pipelines, Yee-Meng Chiew, HY Sept. 92, p1311-1317.

Effects of Footing Location on Bridge Pier Scour, J. Ster-ling Jones, Roger T. Kilgore and Mark P. Mistichelli, HY Feb. 92, p280-290. HY Feb. 92, p280-290.

Effects of Viscosity on Migration of Spills of Hazardous Liquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p784-789.

Engineering Properties and Potential Uses of By-Product Phosphygypsum, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p250-263.

Estimation of Chloride Diffusion Coefficient and Tortuosity Factor for Mudstone, F. S. Barone, R. K. Rowe and R. M. Quigley, GT July 92, p1031-1046.

Evaluation and Control of Collapsible Soils, Adnan A.

Evaluation and Control of Collapsible Soils, Adnan Basma and Erdil R. Tuncer, GT Oct. 92, p1491-1504. Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, Paul A. Dombrowski and James C. O'Shaughnessy, (Environmental Engineering: Solutions, F. Pierce Linaweaver, ed., 1992), p36-41.

Fierce Linaweaver, ed., 1992), p36-41.
Factors Controlling Properties and Durability of Concretionary Laterite Gravel Aggregates, Enuvie G. Akpokodje and Peter P. Hudec, MT Feb. 92, p58-70.
Flexural and Shear Studies of Carbon Fiber Reinforced Beams, Paul Zia, Shuaib H. Ahmad, Rakesh K. Garg and Kristina Hanes, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p984-987.

Fly-Ash Slurry Island: I. Theoretical and Experimental Investigations, Sumio Horiuchi, Masstaka Taketsuka, Takuro Odawara and Hiromi Kawasaki, MT May 92, p117-132.

Forensic Analysis of a Two-Component Joint Sealant Using FTIR-ATR, Laurand H. Lewandowski, Larry N. Lynch and Rogers Graham, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p53-65.

as-Transfer Measurements Using Headspace Analysis of Propane, John R. Thene and John S. Gulliver, EE Nov./Dec. 90, pl 107-1124.

Nov./Dec. 90, p1107-1124. Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, N. Navayogarajah, C. S. Desai and P. D. Kiousis, EM May 92, p990-1011. Hydrocompression Settlement of Deep Fills, Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, p1536-1548.

GT Oct. 90, p1536-1548.

In-Service Durability Evaluation of Armourstone, John-Paul Latham, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Instrumenting the 'Y', Carin L. Roberts, John E. Breen and Patrick M. Bachman, CE Nov. 92, p48-51.

Investigations on Influence of Vibration Parameters on Compacting of Cohesionless Soils, Jerzy Sckowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p969-980.

Kettleman Hills Waste Landfill Slope Failure. 1: Liner-System Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668.

Seed and H. Botton Seed, 17 Apr. 90, po4-6-68. Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Far-rag and Victor Elias, GT Jan. 90, p54-72. Kinematically Unconstrained Compression of Soft Clay, Richard J. Finno and Yongheun Rhee, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p143-157

157.

Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chua, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1941-1951.

Laboratory Investigation of Beach Profiles in Tailings Disposal, Xiaosheng Fan and Jacob Masliyah, HY Nov. 90, p1357-1373.

Laboratory Study of Oil Slick Subjected to Nearshore Cir-culation, A. G. L. Borthwick and S. A. Joynes, EE Nov/Dec. 92, p905-922.

Nov./Dec. 92, p905-922.
Laboratory Testing of Mechanical Rock Bolts, Koon Meng Chua, Jerry Lovato and Roy Cook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.
Laboratory Testing of Stone for Rubble Mound Breakwaters: An Evaluation, David A. Lienhart, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p19-33.
Laboratory Testing of Ultimate Canacity of Depted Tu-Laboratory Testing of Ultimate Canacity of Depted Tu-

Laboratory Testing of Ultimate Capacity of Dented Tu-bular Members, Einar Landet and Inge Lotsberg, ST Apr. 92, p1071-1089.

Laboratory Tests of Modal Emissions and Off-Cycle Cor-rections to FTP-75, Mark A. Carlock, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p211-218.

p211-218.

Laboratory versus Nondestructive Testing for Pavement Design, William N. Houston, Michael S. Mamlouk and Rohan W. S. Perera, TE Mar/Apr. 92, p207-222.

Local Scour at Bridge Abutments, B. W. Melville, HY Apr. 92, p615-631.

Local Sour Downstream of Box-Culvert Outlets, H. Abida and R. D. Townsend, IR May/June 91, p425-440.

Membrane Compliance and Liquefaction of Stuiced Gravel Specimens, Mark D. Evans, H. Bolton Seed and Raymond B. Seed, GT June 92, p856-872.

Merging Field & Laboratory Bridge Scour Data, J. Sterling Jones, Peggy A. Johnson and Arthur C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 100-1105.
Minimum Undrained Strength of Two Sands, J.-M. Konrad, GT June 90, p932-947.

Modeling Strength of Sandy Gravel, Richard J. Fragaszy, James Su, Farhat H. Siddiqi and Carlton L. Ho, GT June 92, p920-935. Nonlinear Water Waves Generated by Submarine and Aerial Landslides, P. Henrich, WW May/June 92, p240-265.

Oil Under Ice: Buoyancy Viscous Spreading, Sujeeva A. Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p102-107.

On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p95-115.
Passive Inclined Anchorages in Sand, James D. Geddes and E. J. Murray, GT May 91, p810-814.

and c. 7. Mulay, Graning Base Course at Fort Campbell, Kentucky, William P. Grogan, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-448.

Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p77-90.

Properties of Gypsum Wallboards Containing Fly Ash, Ramesh C. Joshi, Joonu O. Thomas and Rex B. Adam, MT May 92, p212-225.
Pullout Tests Using Steel Grid Reinforcements with Low-Quality Backfill, Dennes T. Bergado, Kam-Hung Lo, Jin-Chun Chai, Ramaiah Shivashankar, Marolo C. Alfaro and Loren R. Anderson, GT July 92, p1047-

CC Test Specimen Preparation—Developments Toward a Standard Method, Terrence E. Arnold, Theodore B. Feldsher and Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p341-357.

Recent Wave Kinematics Experimental Studies, R. E. Randall, J. Zhang, C. A. Spell and J. K. Longridge, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p607-621.

Hudspetn, ed., 1992, pod-021. Rehabilitation of Cocnrete Dams: Laboratory Simulation of Cracking and Injectability, G. Ballivy, K. Saleh, T. Mnif, J. Maniez, L. M. Landry and M. Nadeau, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625.

Resistance in Flat-Bed Sediment-Laden Flows, D. A. Lyn, HY Jan. 91, p94-114.

Sediment Management with Submerged Vanes. II: Appli-cations, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

91, p.28-302.
Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, Kevin R. Stank and James W. Knox, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p93-114.
Settlement and Moisture Movement in Collapsible Soils, Mostafa El-Ehwany and Sandra L. Houston, GT Oct.

90, p1521-1535.

90, p1321-1333.
Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Semprini and Paul V. Roberts, EE Sept./Oct. 92, p666-689.
Some Factors Related to Injected Shape in Grouting, Akira Mori, Massahito Tamura, Hideaki Shibata and Hideo Hayashi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert C. Holtz, ed. and Ilan Juran, ed., 1992), p313-324.
Static Waye Force Procedure for Platform Design, John

Static Wave Force Procedure for Platform Design, John C. Heideman and Timothy O. Weaver, (Civil Engineer-ing in the Oceans V, Robert T. Hudspeth, ed., 1992), p496-517.

Study of Time-Dependent Local Scour Around Bridge Piers, A. Melih Yanmaz and H. Doğan Altınbilek, HY Oct. 91, p1247-1268.

Subsurface Characterization and Design of an Ash Land-fill on Varved Clays, Siamac Vaghar, Stanley M. Bem-ben and Markus Walbaum, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803. Ultimate Loads of Continuous Composite Bridges, John B. Kennedy and Mohamed Soliman, ST Sept. 92, p2610-2623.

Use of Machine Vision in Bedform Studies, Peter A. Mantz and Wenxue Li, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992).

Weldment Design for RHS Truss Connections. II: Experi-mentation, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2804-2820.

Yielding of Mexico City Clay and Other Natural Clays, J. A. Díaz-Rodríguez, S. Leroueil and J. D. Alemán, GT July 92, p981-995.

Lagrangian functions
Lagrangian Solution of St. Venant's Equations for Alluvial Estuary, Hubert H. G. Savenije, HY Aug. 92, p1153-

Lakes

Application of Monthly Model of Los Angeles Aqueduct System to Investigate Impacts from Mono Lake Tribu-tary Diversions, Russ T. Brown and William R. Hutchison, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1042-1048.

Density Currents Entering Lakes and Reservoirs, Vahid Alavian, Gerhard H. Jirka, Richard A. Denton, Marc C. Johnson and Heinz G. Stefan, HY Nov. 92, p1464-

Efficiency of Jet Mixing of Temperature-Stratified Water, Heinz G. Stefan and Ruochuan Gu, EE May/June 92,

p363-379.

gross-317.
Gravel Equilibrium Beach Design for Arresting Shore Erosion at Flathead Lake, Montana, Steven L. Da Costa, Joseph L. Scott and David P. Simpson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p154-169.

Integrated Assessment of Acid-Deposition Effects on Lake Acidification, Edward S. Rubin, Mitchell J. Small, Cary N. Bloyd and Max Henrion, EE Jan./Feb. 92, p120-134.

92, p120-134.
Interfacing with the Public on Water-Related Issues—
What TVA is Doing, Janet C. Herrin and Arland W.
Whitlock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p293-298.

hullons, Mohammad Karamouz, ed., 1992), p.293-298.
Modeling Three-Dimensional Circulation and Sediment Transport in Lakes and Estuaries, Y. Peter Sheng, D. E. Eliason and X.-J. Chen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p105-115.

An Overview of Segmented Offshore/Headland Breakwa-ter Projects Constructed by the Buffalo District, Thom-as Bender, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p170-188.

Partitioning Phosphorus Loads: Implications for Lake Restoration, Thomas M. Heidtke and Martin T. Auer, WR Sept./Oct. 92, p562-579.

VR SEPLICE: 74, D302-519.

Valley, Steve A. Mizell and Richard H. French, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.128-132.

Review of Equations of Conservation in Conditions.

ed., 1992), p128-132. Review of Equations of Conservation in Curvilinear Co-ordinates, Pei-Fang Wang, EM Nov. 92, p2265-2281. Thermal Stratification Modeling of Lakes with Sediment Heat Flux, Ting-Kuei Tsay, Gordon J. Ruggaber, Steven W. Effler and Charles T. Driscoll, HY Mar. 92, p407-419.

Laminar now
Three-Dimensional Incompressible Flow Calculations
with MacCormack's Method, Robert S. Bernard and
Michael L. Schneider, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
2219.224 p219-224.

Determination of Fracture Toughness for Wood, Mikael Fonselius and Kirsti Riipola, ST July 92, p1727-1740.

Formenus and Karsti Ruipola, ST July 92, p1727-1740.

Modeling Horizontally Nail-Laminated Beams, David R.

Bohnhoff, ST May 92, p1393-1406.

Prestress Level in Stress-Laminated Timber Bridges, Edward F, Sarsiley and Michael L. Accorsi, ST Nov. 90, p3003-3019.

An Analytical Solution to a Clamped Cylindrical Panel with Anti-Symmetric Angle-Ply Laminations, Humayun R. H. Kabir and J. B. Kennedy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Analytical Solutions for Thick, Doubly Curved, Laminated Shells, Jiarang Fan and Juyong Zhang, EM July 92,

Backfill-Stiffened Foundation Wall Design, Robert Ni-cholls, GT Nov. 92, p1822-1836.

Design/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, J. M. Sloss, I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137.

Macromodeling of Complex Composites, P. K. Basu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1071-1074.

Optimum Design of Laminated Composites, R. S. Salzar, F. W. Barton and R. D. Ramsey, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1323-1334.

p132-1334.

Postbuckling Response Simulations of Laminated Anisotropic Panels, Ahmed K. Noor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Probabilistic Assessment of Composite Structures, Christos C. Chamis and Michael C. -Y. Shiao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p543-547.

Niedzwecki, ed., 1992), p543-547.

A Shear Locking Free Three-Node Triangular Plate Bending Element for Moderately-Thick and Thin Symmetrically Cross-Ply Laminated Plates, Humayun R. H. Kabir, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p552-555.

Simultaneous Design and Control of Stiffened Laminated Composite Structures, Luis Mesquita and Manohar P. Kamat, AS Jan. 92, p111-126.

Thermal Load for p-Version Laminated Elements, Pabitra K. Saha, Nesar U. Ahmed and Gautam Saha, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1059-1062.

Thermomechanical Buckling of Multilayered Composite Plates, Ahmed K. Noor and Jeanne M. Peters, EM Feb.

92, p351-366.

Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.

Ultrasonic Wave Scattering by a Crack in a Composite Plate, W. M. Karunasena, A. H. Shah and H. D. Mair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559.

Land acquisition
Minneapolis/St. Paul International (MSP) Part 150 Implementation Design Overview, Steven J. Vecchi, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p32-40.

Price Effects of Landfills on Residential Land Values, Arthur C. Nelson, John H. Genereux and Michelle Genereux, UP Dec. 92, p128-137.

and application

Alkaline Sludge Stabilization: A "Quick Fix" and Long Term Sludge Management Option for Burlington, North Carolina, Stephen R. Shoaf, Morris V. Brookhart and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p399-404.

404.
The Effects of Land Applied Water Treatment Residuals on Soil Phosphorus, James R. De Wolfe and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p297-302.
Sludge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mary, Apr. 92, p196-208.

Unique Approach to Sludge Management, Suzanne L. Schweitzer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p262-268.

Access Management—Myth or Reality, Herbert S. Levin-son and Frank J. Koepke, (Site Impact Traffic Assess-ment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p62-

Arizona's Uniform Traffic Impact Procedures, Peter M. Lima and Eric Kalivoda, (Site Impact Traffic Assess-ment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p94-

Case Study: Design of a Traditional Village Master Plan, Raul J. Cotilla, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p111-120.

Clean-Up of Contaminated Soils: A Necessary First Step in Industrial Land Redevelopment, Dennis D. Lang, (Ports '92, David Torseth, ed., 1992), p301-315.
Commercial Uses of Land Around Urban Railway Stations in Greece, J. Tzouwadakis, UP Dec. 92, p119-127.
Critical Elements of Development Impact-Fee Programs, Arthur C. Nelson, James C. Nicholas and Julian C. Juergensmeyer, UP May 90, p34-47.
Effective Airport Environs Planning in the 1990s, Kristi McKenney, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p25-31.

31.
The Foundation for a Successful Traffic Impact Analysis, Jacob Wattenberg, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), pl 1-15.
A GIS for Land Management, Majed Khalfallah, Salah Benabdallah, Nacurt Chemam and Rached M'Hadbi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p529-933.
The Greening of Greens, R. Todd Borden, CE Oct. 92, p55-57.

The Greening of Greens, R. 1000 Bousin, S. 2016, pp.55-57.
A Guideline for Determining Minimum Threshold Requiring Traffic Impact Studies, Anthony A. Saka, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6-10.
Impact Fees: Practical Guide for Calculation and Implementation, Dennis H. Ross and Scott Ian Thorpe, UP Sept. 92, p106-118.

Land Development Regulations: Roadblock to Affordable Housing, Thomas J. Olenik and S. L. Cheng, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p39-47.

and Use, Transportation and Air Quality Relationships, George J. Scheuernstuhl and Jeffrey H. May, (Trans-portation Planning and Air Quality, Roger L. Wayson, ed., 1992), p90-99.

portation running and Air Quality, Roger L. Wayson, ed., 1992), p90-99.

Neo-Traditional Neighborhoods: A Solution to Traffic Congestion? John R. Stone and Charles A. Johnson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p72-76.

Palm Beach County Traffic Impact Analysis—A Prototype, Joseph B. Pollock, Jr. and Jacob Wattenberg, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p104-108.

Pay As You Grow, Teresa Austin, CE Feb. 92, p64-65.

A Proposed Revised State Zoning Enabling Act, George W. Liebmann, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p91-100.

Site Impact Analysis Using the Tranplan Computer Model, Robert B. Hearn and L. P. Ledet, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p82-83.

ed., 1992), p82-83

Traffic Impact Analysis Standardization—The Orange County, California Experience, Steve Hogan, Jerry In-gram and Kari Rigoni, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), 99-103.

The Traffic Impact Study and Traffic Impact Fees, Timothy T. Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p228-232.

Use of GIS for Resource Management in Hong Kong, Jan R. Selwood and Peter G. D. Whiteside, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p942-949.

ett., 1972), p942-747.

Land information systems

A Description of LANDSIM and Its Uses, Thomas S. Russell, Jr., Mark W. Coe, Robert H. Eltzboltz, Francine M. Hamerski, Judd E. Squitier and Michael E. Zientek, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941.

Role of Land Information Systems Bureau of Reclamation, James B. Robertson and Sharen L. Wood, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p317-322.

Land management
A Description of LANDSIM and Its Uses, Thomas S.
Russell, Jr., Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitter and Michael E.
Zientek, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941.

A GIS for Land Management, Majed Khalfallah, Salah Benabdallah, Naceur Chemam and Rached M'Hadbi, (Computing in Civil Engineering and Geographically). In Communication Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p929-933.

Reli R. Wright, ed., 1774, pp.2775.3.
Role of Land Information System in Operation and Maintenance of Irrigation Systems Bureau of Reclamation, James B. Robertson and Sharen L. Wood, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p317-322.
Simulation of Rusoff and Infiltration of Disturbed Land

Search of Sommons, Teel Enginant, ed., 1922, p.511-322. Simulation of Runoff and Infiltration of Disturbed Land, Ben Chie Yen and Robert Riggins, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p401-406.

Land reclamation
Drainage Efficiency of Sand Layer in Layered Clay-Sand
Reclamation, Siew-Ann Tan, Kee-Ming Liang, KwetYew Yong and Seng-Lip Lee, GT Feb. 92, p209-228.
Hydrologic Considerations in Mined Land Reclamation,
Patrick T. Tyrrell and Martin W. Stearns, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p383-388.

Land Reclamation Design for the Port of Los Angeles' 2020 Plan, J. Warwar and R. Wittkop, (Ports '92, David Torseth, ed., 1992), p577-590.

Multibillion-Dollar Resort Planned for Japan, CE Mar.

92, p29. 92, p.29. Three-Dimensional Analytical Techniques for Assessing Overburden Toxicity as a Decision-Making Tool for Reclaimability Determinations, L. A. Parsons, K. Kirk and A. Wilhelm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p839-845.

Variations in Curve Number for a Reclaimed AML Site, K. James Fornstrom and James L. Smith, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p389-394.

X Marks the Spot at Hanford, CE July 92, p11.

Land surveys

Geographical Information System (GIS) Technology in Global Environmental Evaluation—An Overview, Robert C. Lozar, Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2104-2127. Start-Ups, CE Feb. 92, p12.

Land titles

Ecuador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, Ricardo Javier Moreno, SU Nov. 92, p118-129.

Alternative Methods of Drainage Management in San Joaquin Valley, California, S. Alireza Taghavi and Ben Everett, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337.

Mohammad Karamouz, ed., 1992), p332-337.
The Application and Use of Impact Fees: Legal Issues, Charles L. Siemon, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p238-243.
Are Existing Traffic Methodologies Realistic? Nelson B. Nuckles, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p211-216.
Commercial Uses of Land Around Lithan Railway Sta.

Commercial Uses of Land Around Urban Railway Sta-tions in Greece, J. Tzouvadakis, UP Dec. 92, p119-127.

Delaware Estuary Nonpoint Source Control Program, William Whipple, Jr. and Van Dyke Polhemus, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p718-723.

Ecuador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, Ricardo Javier Moreno, SU Nov. 92, p118-129.

Elements of Effective State Land-Use Planning Policy, Arthur C. Nelson, UP Sept. 92, p97-105.

Estimation of Pass-By Trips Using a License Plate Survey, Soumya S. Dey and Jon D. Fricker, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p42-46.

Land Use and Imperviousness Information Acquisition, Ming T. Lee, (Hydraulic Engineering: Saving a Threatened Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p363-368.
Land Use, Transportation and Air Quality Relationships, George J. Scheuernstuhl and Jeffrey H. May, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p90-99.
Management of Subsurface Data Using Spatial Analysis,

ed., 1992.), p90-99.

Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p582-589.

Multiple Subregion Allocation Models, Salah Benabdallah and Jeff R. Wright, UP Mar. 92, p24-40.

Sensitivity of HMR-51/52/PMP-Based Probable Maximum Flood (PMF) to Basin Lag and Land Use, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 895-899.

Sensitivity of Non-Point Source Pollution Controls to Land Use, Oner Yucel and David W. Blaha, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p358-363.

1992), p.358-363. Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, 0-87262-870-1, 236pp. Trends in Published ITE Trip Generation Rates, C. Richard Keller, Jay E. Sherin and Michael C. Connor, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.32-36.

tions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p32-36.

Land usage planning
Corridor Planning and Traffic Assessment: Small Sites and Neighborhoods, Marsha Anderson and Diane Simpson-Colebank, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p190-194.

Elements of Effective State Land-Use Planning Policy, Arthur C. Nelson, UP Sept. 92, p97-105.

Geol.ink: Integrating GIS and GPS for Land Use Planning, Road Mapping, and Environmental Analysis, Douglas Richardson and Thad Mauney, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p325-327.

A GIS for Land Management, Majed Khalfallah, Salah Benabdallah, Naceur Chemam and Rached M'Hadbi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p929-933.

Minneapolis/St. Paul International (MSP) Part 150 Implementation Design Overview, Steven J. Vecchi, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p32-90.

Multiple Subregion Allocation Models, Salah Benabdallah and Leff R. Wright, UP Mar. 92, p34-40.

Neo-Traditional Neighborhoods: A Solution to Traffic Congestion? John R. Stone and Charles A. Johnson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p79-970.

Small Stream Classification—A Process Based Approach, Jeffrey B. Bradley and Peter J. Whiting, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Traffic Impact Analysis Standardization—The Orange County, California Experience, Steve Hogan, Jerry Increase and Ker Bisson', Site Impact Traffic Assessment: Problems and Solution and Ker Bisson', Site Impact Traffic Assessment: Problems and Solutions Marshall Jennings, ed. and Nani G. Traffic Marsha Steven

Traffic Impact Analysis Standardization—The Orange County, California Experience, Steve Hogan, Jerry In-gram and Kari Rigoni, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p99-103.

Landmis
Better Cover-Ups, Robert M. Koerner and David E. Daniel, CE May 92, p55-57.
Cause and Mechanism of Failure Kettleman Hills Landfill B-19, Phase IA, R. John Byrne, J. Kendall and S. 
Brown, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. 
Boulanger, ed., 1992), p1188-1215.

Clean-Up of Contaminated Soils: A Necessary First Step in Industrial Land Redevelopment, Dennis D. Lang, (Ports '92, David Torseth, ed., 1992), p301-315. The Cold Truth About Landfills, CE Jan. 92, p11.

A Cushy Job for Landfill Liners, CE Dec. 92, p8.

Design of a Mechanical Refuse Barrier, Edward J.

Schmeltz, (Coastal Engineering Practice '92, Steven A.

Hughes, ed., 1992), p680-696.

Design of Landfill Drainage Systems, Bruce M. McEnroe, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p208-213.

The Design of Landfill Slopes, Ibraheem Alshunnar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1232-1243.

Effects of Freezing on Hydraulic Conductivity of Com-pacted Clay, Woon-Hyung Kim and David E. Daniel, GT July 92, p1083-1097.

Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov./Dec. 92, p848-864.

FGD Waste Engineering Properties are Controlled by Disposal Choice, Charles L. Smith, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p44-59.

Grouting for Hazardous Waste Site Remediation at Necco Park, Niagara Falls, New York, K. D. Weaver, R. M. Coad and K. R. McIntosh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1332-1343.

Holtz, ed. and han Juran, ed., 1992, p. 1332-1343.

Hydraulic Conductivity of Landfill Liners Containing
Benzyltriethylammonium-Bentonite, James A. Smith,
Pamela M. Frankin and Peter R. Jaffé, (Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p186191.

Hydraulic Conductivity of Three Landfill Clay Liners, Mark E. Gordon, Paul M. Huebner and Thomas J. Miazga, GT Aug. 89, p1148-1160. Land Reclamation Design for the Port of Los Angeles' 2020 Plan, J. Warwar and R. Wittkop, (Ports '92, David Torseth, ed., 1922), p577-592. Landfill-Cover Conflict, Teresa Austin, CE Dec. 92, p70-

Landfills: Anatomy of Automated Design, Juan C. Vargas and David B. Porter, CE Mar. 92, p52-55. Leachate Treatment Helps Landfill Expand, CE Apr. 92.

pos.

Leakage Mechanism Through Double Liner Systems, Abdul R. Mulla Saleh, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p192-200.

Optimal Scheduling of Consecutive Landfill Operations with Recycling, Timothy L. Jacobs and Jess W. Everett, EE May/June 92, p420-429.

Permeation of Organic Chemicals Through HDPE Geomembranes, Joni P. Sakti, Jae K. Park and John A. Hoopes, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p201-207.

Predicting Effects of Subsidence on Landfill Caps, A. W. Bredariol, J. Larralde, J. P. Martin and C. A. Fiori, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p360-364.

Price Effects of Landfills on Residential Land Values, Arthur C. Nelson, John H. Genereux and Michelle Genereux, UP Dec. 92, p128-137.

Properties of Tire Chips for Lightweight Fill, Dana N. Humphrey and William P. Manion, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1344

A Rule-Based System for Evaluating Final Covers for Hazardous Waste Landfills, Lewis A. Rossman and James T. Decker, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p161-175.

A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416.

Sediment Sampling Techdniques in Complex Environments, John J. Nocera, Gregory P. Matthews and Thomas M. Simmons, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p92-97.
Seismic Anlaysis and Design of Lined Waste Fills: Current Practice, Raymond B. Seed and Rudolph Bonaparte, (Stability and Performance of Slopes and Embarkments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1521-1545.
Seismic Response of Landfill Slopes, D. G. Anderson, B. Seismic Response of Landfill Slopes.

Boulanger, ed., 1992), p1521-1545.
Seismic Response of Landfill Slopes, D. G. Anderson, B. Hushmand and G. R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p973-989.
Seismic Stability Analysis of Landfill, Max Y. Ma, Albert T. Yeung and An-Bin Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724.
Stability Analysis of a Municipal Solid Wastz Landfill

17721, pr. 21-12a.
Stability Analysis of a Municipal Solid Waste Landfill, Jonathan D. Howland and Arvid O. Landva, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1216-1231.

mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl.216-1231.

Stability and Closure Design for a Landfill on Soft Clay and Peat, Richard A. Mitchell, Sybil E. Hatch and Ronald A. Siegel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p685-704.

Stability Evaluation of Waste Landfills, Richard A. Mitchell and James K. Mitchell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1152-1187.

Subsurface Characterization and Design of an Ash Landfill on Varved Clays, Siamac Vaghar, Stanley M. Bernben and Markus Walbaum, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803.

Taming Environmental Data, Neno Duplancic and Gregory Buckle, CE Aug. 92, p36-58.

Treatability Study on the Biological Treatment of Landfill Leachate and Gas Condensate, Bill Y. Liu, Alan Y. Li and James F. Urek, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p405-410.

Two-Dimensional Leachate Estimation through Landfills Shabbir Ahmed Reza M. Khanbilyardi, John Fil-

Two-Dimensional Leachate Estimation through Land-fills, Shabbir Ahmed, Reza M. Khanbilvardi, John Fil-los and Phillip J. Gleason, HY Feb. 92, p306-322.

los and Philip J. Gleason, HY Feb. 92, p306-322.
Unique Approach to Sludge Management, Suzanne L. Schweitzer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p262-268.
Value Engineering at a Superfund Site, Virendra Singh and Amy Monti, CE Mar. 92, p60-63.

What a Place to Put a Landfill, CE June 92, p11.

Landslides
Application of EPS for Slide Correction, Shan-Tai Yeh and John B. Gilmore, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1444-1456.
Comparison of Field and Laboratory Residual Strengths, Timothy D. Stark and Hisham T. Eid, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-889.

889.
A Geologist's Perspective on Dam Foundation Grouting, Kenneth D. Weaver, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), 639-650.
Geotechnical Database Manipulation to Effect Stochastic Analysis, James M. Keane, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p224-227.
Hydrauers at the Via de Ley Olas Landslide, W. H. Roth

Hydraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rice, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-1364

1364.
Landslide Hazard Analysis for Pipeline Design, Northeast Utah, Jeffrey R. Keaton, Robert M. Robison and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204.
Landslide-Generated Waves in Reservoirs, C. J. Tang and J. F. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p220-223.

Natural Landslides, George F. Sowers, (Stability and Performance of Sidpes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), 8904-833.
Nonlinear Water Waves Generated by Submarine and Aerial Landslides, P. Henrich, WW May/June 92,

p249-266.

Pelton Landslide: An Unusual Double-Wedge Failure, Derek H. Cornforth and D. Andrew Vessely, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p310-324

obabilistic Analysis of Groundwater Levels in Hillside Slopes, Lakshmi N. Reddi and Tien H. Wu, GT June 91, p872-890.

306

Slope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867.

Leshchinsky, GT May 90, p851-867.
Slope Stabilization at the Forks of Butte Project, Stephen
J. Klein and David K. Hughes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed,
ed. and Ross W. Boulanger, ed., 1992), p905-922.
Soil Strengths from Back Analysis of Slope Failures, J.
Michael Duncan and Timothy D. Stark, (Stability and
Performance of Slopes and Embankments II, Raymond
B. Seed, ed. and Ross W. Boulanger, ed., 1992), p890-

Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, ry of Slide, Sukhmander Singh and Robert D. Darragh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049.

1992, p103-1049.

Kabilization of Tablachaca Dam Landslide, Richard A. Millet, Gil M. Lawton, Pedro C. Repetto and Vinod K. Garga, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1365-1381.

Steady-State Strength Analysis of Lower San Fernando Dam Slide, Gonzalo Castro, Raymond B. Seed, Thom-as O. Keller and H. Bolton Seed, GT Mar. 92, p406-

Strength Correlation Factor for Residual Soils, N. Lo-ganathan, Suraj de Silva and A. Thurairajah, GT Apr. 92, p593-610.

A Study of Slope Stability Analysis, R. J. Deschamps and G. A. Leonards, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p267-291.

w. Boulanger, ed., 1992), p267-291.
Two New Specialty Geotechnical Processes for Slope Stabilization, Donald A. Bruce, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1503-1519.
Tying Back a Landstide, Stephen J. Klein, CE Dec. 92, p40-43.

Zunii 1 Landslide and Landslide Hazard, Gerald R. Thiers, Alan Benfer, Luis Merida and Richard Grass, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p205-221.

Laplace transform
Dynamics of Saturated Rocks. IV: Column and Borehole
Problems, Irene Vgenopoulou and Dimitri E. Beskos,
EM Sept. 92, p1795-1813.

List Sept. 24, pp. 179-1812.
High Frequency Basin Irrigation Design for Upland Crops in Rice Lands, George J. Moridis and Manuel Alagcan, IR July/Aug. 22, pp. 564-583.
River Bed Degradation Due to Abrupt Outfall Lowering, C. W. Lenau and A. T. Hjelmfelt, Jr., HY June 92, p918-933.

raph-Theory Approach to Eigenvalue Problem of Large Space Structures, A. S. S. R. Reddy, AS Jan. 92, p70-78.

78.
On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.

Russel J. Miller, ed., 1992, psys-100y. Reliability-Based Optimization Using Sequential Quad-ratic Programming, Sankaran Mahadevan, (Probabilis-tic Mechanics and Structural and Geotechnical Reliabil-ity, Y. K. Lin, ed., 1992), p543-546.

A Review of Design Criteria for High RCC Dams, Mal-colm R. H. Dunstan, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p132-147.

Structural Design Methodology of Large Space Struc-tures, Ralph J. Dornsife, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1022-1034.

ateral forces

Broadside Current Forces on Moored Ships, William N. Seelig, David Kriebel and John Headland, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p326-340.

htterslice Force Functions for Limit Equilibrium Analysis, Harianto Rahardjo, Delwyn G. Fredlund and Ken K. Fan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p325-341.

Lateral loads
Analysis of Laterally Loaded Shafts in Rock, John P. Carter and Fred H. Kulhawy, GT June 92, p839-855.
Approximating Lateral Stiffness of Stories in Elastic Frames, Arturo E. Schultz, ST Jan. 92, p243-263.
Design of Piles in Permafrost Under Combined Lateral and Axial Load, A. Foriero and B. Ladanyi, CR Sept.

91, p89-105

Finite Element Simulation of Behavior of Laterally Load-ed Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

In-Plane Floor Deformations in RC Structures, Hassan S. Saffarini and Musa M. Qudaimat, ST Nov. 92, p3089-3102.

Lateral Analysis of Piers Constructed on Slopes, Moham-med A. Gabr and Roy H. Borden, GT Dec. 90, p1831-1850.

Modeling Load-Slip Behavior of Nailed Joints, Ruy A. Sa Ribeiro and Patrick J. Pellicane, MT Nov. 92, p385-

398. Modeling Slab Contribution in Frame Connections, B. M. Shahrooz, S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494. Pile Lateral Load Test in the Port of Los Angeles, Matthew F. Hunter, Allen M. Yourman, Gerald M. Diaz and Hsuch-Hsin Chu, (Ports '92, David Torseth, ed., 1992), p322-335. Prebuckling Deflections and Lateral Buckling. I: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Appli-cations, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2967-2985.

p.2967-2985. QLRS: An Approach for Qualitative Interpretation of Lateral Load Resisting Systems, Renate Fruchter and Helmut Krawinkler, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.253-260.

Use of Drilled Shafts in Stabilizing a Slope, Lymon C. Reese, Shin-Tower Wang and Jeffrey I. Fouse, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332.

Lateral pressure
Retaining Wall With Reinforced Cohesionless Backfill,
Swami Saran, K. G. Garg and R. K. Bhandar, GT Dec.

Effect of Lateral Stress on CPT Penetration Pore Pressures, J. P. Sully and R. G. Campanella, GT July 91, p1082-1088.

Factors Controlling Properties and Durability of Concretionary Laterite Gravel Aggregates, Enuvie G. Akpokodje and Peter P. Hudec, MT Feb. 92, p58-70.

Lattice design Force Deformation Equations for Initially Curved Later-ally Loaded Beam Columns, R. E. McConnel, EM July 92, p1287-1302.

Lattices

Use of Hierarchical Lattices for Predicting the Fluid or Stress Transfer in Concrete, D. Breysse, D. Fokwa and G. Schlatter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p171-174.

Launching
Method Proposed for Construction of Multispan CableStayed Bridges, W. H. Dilger, G. S. Tadros and P.
Giannelia, CO June 92, p273-282.

Optimizing Launch-on-Time Probability, George W. Morgenthaler, AS July 92, p369-386.

Laws

Can Civil Engineers Make the Difference by Involvement in the Political Process? Karen S. Irion, El Oct. 89, p441-445.

Controlling the Flow of Recyclable Material, David L. Snyder, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p9-21.

Criminal Engineers: Engineers Who Prefer Pirating to Purchasing Will Pay the Price, CC Oct. 92, p10-11.

In Too Deep, Robert A. Rubin and Jeannette L. Molina, CE Dee, 92, p67-69.

An Ounce of Prevention: How to Stay Legal, CC Oct. 92, p11-12.

p11-12.

Regulatory Law and Policy to Support Space Mining, Bruce S. Marks and William R. Sharp, (Engineering, Construction, and Operations in Space III, Willy Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2208-2219.

1992), p2208-2219.
Resolving Contract Disputes Based on Misrepresentations, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.
Salvage Law for Outer Space, Wayne N. White, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422.

Layered soils

Analysis of Recharge in Anisotropic, Layered, Saturated-Unsaturated Soil, Abolfazl Shamsai and Miguel A. Mariño, IR July/Aug. 92, p584-600.

Critical Reappraisal of Colloidal Activity of Clays, N. S. Pandian and T. S. Nagaraj, G.T Feb. 90, p285-296.

Finite Element Simulation of Behavior of Laterally Load-

ed Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Rocking Impedance of Embedded Strip Foundations in Layered Soil, A. Bharadwaj and S. Ahmad, GT May 92, p796-813.

Layered Soil, A. Bharadwaj and S. Ahmad, GT May 92, p796-813.

Layered systems

AASHTO Direct Structural Capacity Method Error Analysis, Ronald L. Baus and Andrew M. Johnson, TE Jan./Feb. 92, p20-32.

Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, Siew-Ann Tan, Kee-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p20-228.

An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, Y. Wang and R. K. N. D. Rajapakse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1008-1011.

F-K Spectra From a Haskell-Type Source in a Multiple-Layered Half-Space, George Deodatis, Andronikos Theobaris and Massanobu Shinozuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p272-275.

Frontal Dynamics and Circulation of the Upper Layer of a Fjordsystem with Complicated Topography, Harald Swendsen, Susanne R. Mikki and Lars G. Golmen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p522-267.

Interaction Between Soil and a Rigid Foundation in a Layered Medium: A New Analytical Approach, R. C. Zhang, Y. Yong and J. Yu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p584-587.

Properties of Aramid-Fiber Reinforced Concrete and SIF-CON, Antonio Nanni, MT Feb. 92, p1-15.

1992, p584-587.

Properties of Aramid-Fiber Reinforced Concrete and SIF-CON, Antonio Nanni, MT Feb. 92, p1-15.

Rigid-Pavement Evaluation Using NDT—Case Study, Jacob Uzan, TE July/Aug. 92, p527-539.

Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, EM Aug. 92, p1661-1678.

Strength and Efficiency of Wood Box Columns, D. B. Van Dyer, ST Mar. 92, p716-722.

Thermal Stresses in Bi-Coated Structures, Mauro Ferrari and Luca Lutterotti, EM Sept. 92, p1928-1938.

Layout
ASG COGO, Brian Brenner and Dennis Njuguna, CC
Mar. 92, p1,4-6.

Mar. 92, p1,4-6.

Reasoning Mai: 92, p1, 9-0.
Constructing Site Layouts using Blackboard Reasoning with Layered Knowledge, Iris D. Tommelein, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p214-258.

Fine Tuning the Airfield: The New Denver International Airport, Richard F. Veazey, (International Air Trans-portation: A New International Airport, Robert E. Boyer, ed., 1992), p7-13.

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

Design of Landfill Drainage Systems, Bruce M. McEnroe, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p208-213.

Hydraulic Conductivity of Three Landfill Clay Liners, Mark E. Gordon, Paul M. Huebner and Thomas J. Miazga, GT Aug. 89, p1148-1160.

Landfill Storm Water Runoff Control, Paul Makowski and Daniel Pazdersky, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p423-428.

Leachate Treatment Helps Landfill Expand, CE Apr. 92, p85.

Leakage Mechanism Through Double Liner Systems, Abdul R. Mulla Saleh, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p192-200.

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

Permanence of Grouted Sands Exposed to Various Water Chemistries, John M. Siwula and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1403-1419.

Resolving Environmental Concerns: Ash Beneficial Re-use, Richard W. Goodwin, Utilization of Waste Mate-rials in Civil Engineering Construction, Hilary I. In-yang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31.

yang, ed. and Renneth L. Bergeson, ed., 1972, p.22-91.
Treatability Study on the Biological Treatment of Landfill Leachate and Gas Condensate, Bill Y. Liu, Alan Y.
Li and James F. Urek, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p.405-410.

Two-Dimensional Leachate Estimation through Land-fills, Shabbir Ahmed, Reza M. Khanbilvardi, John Fil-los and Phillip J. Gleason, HY Feb. 92, p306-322.

Assessing the Leaching Potential of Herbicides at the Ohio MSEA, S. R. Workman, A. D. Ward and W. G. Knisel, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p413-418.

Comparison of Glass Reaction at High and Low SA/V: PCT Vs. MCC-1, William L. Ebert and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p934-942.

Current Chemical Grout Engineering in Japan, Ryozo Yonekura and Munehiko Kaga, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-

The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, Pankaj A. Arora and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p451-456.

Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, Kanwar Raj, M. S. Kumra and A. N. Prasad, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p899-903.

management rugam Committee, 1992), p899-903.

Initial Comparison of Leach Behavior Between Fully Radioactive and Simulated Nuclear Waste Glasses Through Long-Term Testing, Part I. Solution Analysis, Xiangdong Feng and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p925-933.

Mitigation of Acidic Mine Drainage: Engineered Soil Barriers for Reactive Tailings, Abdel-Mohsen O. Mohamed, Raymond N. Yong and Boon K. Tan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462.

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojas and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p158-163.

Production of Lunar Oxygen, Iron, Magnesium, and Silicon by Aqueous Hydrofluoric Acid Leaching, William N. Agosto, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p678-689.

Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinipour and Vincent M. Gorokhovski, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p186-191.

Waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing

G. Snowmik, ed., 1992, p.180-191.

Waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing Plant, Krishna Vinjamuri, Swami V. Raman, Dieter A. Knecht and James D. Herzog, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1261-1271.

Winter, Nitrient Leases to Groundwater Associated with

Management Program Committee, 1992), p1261-1271.
Winter Nutrient Losses to Groundwater Associated with Various Tillage Manure Systems, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p567-572.

Lead
Removal of VOCs and TEL in Iron-Rich Groundwaters,
James E. Rumbo, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p116-121.
Sensor Can Get the Lead Out, CE Oct. 92, p8.
Ten Tons of Lead to Recreate Monticello, CE Apr. 92,

Ten Tons of Lead to Recreate Montrello, C. April 29, p10.

U.S. Lead Recycling Plant Uses Italian Technology, CE June 92, p27-28.

Uses of GIS Technology for the Analysis and Visualization of Arsenic Concentration in Soils, Irene Findikaki, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p443-451.

Leadership ADR, TQM, Partnering, and Other Management Fanta-sies, F. H. "Bud" Griffis, El Oct. 92, p331-344.

Collective Excellence: Building Effective Teams, Mel Hensy, 1992, 0-87262-841-8, 110pp. Managing for Profit, Chester A. Shuman, CE Nov. 92, p72-73.

Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Sa-tyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

# Leakage

Leakage
Design of Pneumatic Diffuser System, Steven C.
Wilhelms, Charles W. Downer and Richard E. Price,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jeanings, ed.
and Nani G. Bhowmik, ed., 1992), p1055-1060.
Filters and Leakage Control in Embankment Dams
(Paper introduced by Lorn P. Dunnigan), James L.
Sherard and Lorn P. Dunnigan, (Embankment
Dams—James L. Sherard Contributions, Sukhanander
Singh, ed., 1992), p411-441.
Fingerprint Identification of Groundwater Petroleum
Contamination Using Synchronous Scanning Fluorescence, Daniel York Pharr, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p579-584.
The Great Chicago Flood of 1992. Randall R. Incurve and

ps) 19-394.

The Great Chicago Flood of 1992, Randall R. Inouye and Joseph D. Jacobazzi, CE Nov. 92, p52-55.

Hydraulic Fracturing in Embankment Dams (Paper introduced by Edward B. Perry), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p442-469.

Infrared Thermographic Sensing of Sewer Pipeline Prob-lems, Gary J. Weil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p890-893.

Search of Solutions, Mohammad Karamouz, ed., 1992), p890-895.
Leakage Characteristics of the St. Jude Heart Valve, p890-895.
Leakage Characteristics of the St. Jude Heart Valve, Theresa E. Brandner and Yi-Ren Woo, (Engineering, Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708.
Leakage Mechanism Through Double Liner Systems, Abdul R. Mulla Saleh, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p192-200.
Leaks in Pipe Networks, Ranko S. Pudar and James A. Liggett, Hy July 92, p1031-1046.
Masonry Wall and Window System Leakage Investigation for University Building, John Frauenhoffer, CF May 92, p107-115.
Models for Calculating Radionuclide Release from the Near Field, L. Romero, L. Nilson, L. Moreno and I. Neretnieks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p954-959.
New Tanks Stop Leaks at Army Base, CE Oct. 92, p88.
Numerical Method for Finding Leaks in Pipe Networks, Ranko S. Pudar, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p809-815.

Performance of Upper Stillwater Dam, Alan T. Richard-son, (Roller Compacted Concrete III, Kenneth D. Han-sen, ed. and Francis G. McLean, ed., 1992), p148-161. Pipe Runs from Prison, Welcomed by Town, CE May 92.

ppe Auns 10011
ppe 198.
Solving MWRA's Supply Issues Through Conservation,
Marcis Kempe, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p163-

The Total System Solution, David J. Daley and James B. Hinte, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647.

Learning curve
In Search of Knowledge, Richard Forsyth, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p1-10.
Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700.

Least squares method Engineering Analysis of Extreme Value Data: Selection of Models, Enrique Castillo and José María Sarabia, WW Mar./Apr. 92, p129-146.

Equivalent Kostiakov Parameters for SCS Infiltration Families, Subramania Iyer Sritharan, IR Jan./Feb. 92, p192-197.

p192-197.
Generalized Least Squares Analyses for Hydrologic Regionalization, Jery R. Stedinger and Gary D. Tasker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p7-12.
Robust Testing Procedure for Detection of Multiple Blunders, Y. Gao, E. J. Krakiwsky and J. Czompo, SU Feb. 92, p11-23.

Saturation Flow and Capacity of Shared Permissive Left-Turn Lane, Feng-Bor Lin, TE Sept./Oct. 92, p611-630.

Legal factors
ASCE Quality Manual Undermined, Lawsuit Says, CE
June 92, p16,18.

June 92, p16,18.

Buyer Beware: Pinning Liability on Vendors is Virtually Impossible for Now, CC Oct. 92, p4-5.

Computer Design Failure: Who Pays? Tracy Lenocker, CC Oct. 92, p1-3,6-7.

Contracting and Legal Issues, Robert A. Rubin and Jeannette L. Molina, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p6-25.

Controlling the Flow of Recyclable Material, David L. Snyder, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p9-21.

Courts Further Define an Improvement to Realty, CE Jan. 92, p27.

Criminal Engineers: Engineers Who Prefer Pirating to Purchasing Will Pay the Price, CC Oct. 92, p10-11. Ethical, Legal and Professional Responsibilities of Engineers to Owners and Contractors, Lawrence 1. Erdos, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p989-1002. Government Declares War on Pirates, CC Dec. 92, p14. In Too Deep, Robert A. Rubin and Jeannette L. Molina, CE Dec. 92, p67-69.

Legal Logistics of Software Evaluation, Philip Terry, CC Apr. 92, pl-3. Legal Logistics of Software Evaluation, Philip Terry, CC May 92, pl,11-13.

May 92, p1, 11-13.
Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resource Planning and Management: Saving a Threat-end Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230.
Mechanic's Lien Law Applies to Off-Site Work, CE Oct.

92, p28.

An Ounce of Prevention: How to Stay Legal, CC Oct. 92, p11-12.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p511-516.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p33-38. State's Indemnity Laws Unenforceable, CE Jan. 92, p27.

SuperChange: Expert System for Analysis of Changes Claims, James E. Diekmann and Moonja P. Kim, CO June 92, p399-411.

Legislation
Can Civil Engineers Make the Difference by Involvement in the Political Process? Karen S. Irion, El Oct. 89, p441-45.
Education Issues in 1992, Casey Dinges, CE Feb. 92,

p114.

Effective Airport Environs Planning in the 1990s, Kristi McKenney, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p25.

Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 191 to Other Wastes, Neil J. Numark and Suzanne R. Phelps, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1074-1081.

ment Program Committee, 1992), p104-1081. Evolution of the French Policy Related to the Studies on Long-Lived Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p49-51. Huge Transportation Bill Signed by Bush; States Will Have Flexibility in Spending Federal Funds, NE Jan.

92, pl.

92, pl.
Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, Carl B. Ellis and Cindy L. Rogers, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2207-2211.
Infrastructure Bill Clears Congress, NE Nov. 92, p3.
Mandated Public Participation in Siting of Hazardous and Conventional Waste Facilities: The Illinois Experience, Rabel J. Burdge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1909-1916.
New Federal Ethics Regulations Deferred—For Now at Least, NE Feb. 92, p1.
Oklahoma's Ground Water Protection Strategy, Michael D. Smolen and Patricia E. Norris, (Irrigation and

Orianoma's Ground Water Protection Strategy, Michael D. Smolen and Patricia E. Norris, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p98-103.

Pilot Study to Meet Drinking Water Regulations, Linda Rae Leong, Patti P. Craddock and Carol Ruth James, (Excitation, and Engineering Course a Threat Pro-

(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509.

Rush of Legislation Concludes 102nd Congress, Casey Dinges, CE Dec. 92, p112.

Status of Infrastructure Studies and Results, Michael Conroy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p183-189.

The Total System Solution, David J. Daley and James B. Hinte, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647.
Transportation Bill Revises Federal Policy, Casey Dinges, CE Jan. 92, p106.

Welifield Protection Program in Broward County, Flori-da, Robert C. Shair, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p69-74.

Length
Optimal Linear Segmented Structures with Variable Segment Boundaries, C. J. Goh and C. M. Wang, EM Dec. 92, p2376-2383.

92, p2376-2383.
Sample Disturbance of Cemented Collapsible Soils, Sandra L. Houston and Mostafa El-Ehwany, GT May 91, p731-732.
Velocity Distribution in Uniform Sediment-Laden Flow, Motohiko Umeyama and Franciscus Gerritsen, HY Feb. 92, p229-245.

Wire Recovery Length in Suspension Bridge Cable, Mo-hammed Raoof and Yu Ping Huang, ST Dec. 92, p3255-3267.

Levees

Corps Unveils New Levee Repair Method, CE Aug. 92, p19-20.

p19-20.
International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teresa Bowen MacArthur, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p569-574.
Levee/Floodwall Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808.
Revised Hydraulic Design of the Los Angeles County Flood Control System, Michael E. Mulvihill and Scott E. Stonestreet, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612-617. 617.

Threatened Levees on Sherman Island, Roger Foott, Richard Sisson and Roy Bell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p756-774.

iabilities

Liabilities
A/E or Contractor Liability? Michael C. Loulakis and
William L. Cregger, CE Jan. 92, p.35.
Comprehensive Liability Doesn't Cover the Product, CE
June 92, p.31.
Engineers Not Required to Recommend Median Barriers,
CE Oct. 92, p.28.

Milico Defice Conferencies CF Luby 93 a 30.

Malice Defines Defamation, CE July 92, p30.

Tort Liability: Limiting U.S. Innovation, Harvey M.

Bernstein, CE Nov. 92, p6.

Liability

Liabulty

Buyer Beware: Pinning Liability on Vendors is Virtually Impossible for Now, CC Oct. 92, p4-5.

Clean-Up of Contaminated Soils: A Necessary First Step in Industrial Land Redevelopment, Dennis D. Lang, (Ports '92, David Torseth, ed., 1992), p301-315.

Computer Design Failure: Who Pays? Tracy Lencker, CC Oct. 92, p1-3,6-7.

Cottesting del Lean Lesuer, Robert A. Rubin and Lean.

Contracting and Legal Issues, Robert A. Rubin and Jean-nette L. Molina, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p6-25. Contractor Not Liable for Sub's Shoddy Work, CE Sept.

92, p32.

Contractors Not Liable for Employee Drinking, CE Apr. 92, p26.

72, p.20. Court Ruling May Broaden Liability Nationwide, CE Nov. 92, p.27-28.
Courts Set Aside Jury Verdict in FTR Plywood Case, Michael C. Loulakis and William L. Cregger, CE May 92, p40,42.

Employer Liability for Job-Site Injuries, Michael C. Loulakis and William L. Cregger, CE Apr. 92, p37. Engineering Firm Not Liable for Contractor, CE Mar. 92,

Improper Uses of Construction Specifications, Bryce Simons, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p316-324.

In Too Deep, Robert A. Rubin and Jeannette L. Molina, CE Dec. 92, p67-69.

Legal Logistics of Software Evaluation, Philip Terry, CC May 92, p1,11-13.

Liability Issues Featured in CECR, CE Oct. 92, p8. Monitored Construction Protects Contractor, CE Feb. 92.

p28. No Indemnity Available from Third Party, CE July 92,

Protecting Engineer Against Construction Delay Claims: NDC, David M. Leishman, ME July 91, p314-333. Risk Reduction Through Indemnification Contract Clauses, Peyton E. Hutchens, ME July 92, p267-277.

Chauses, rejune Francisco, M. P. July 2-2, 200-201.
Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.
Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Smith and R. D. Roth, CO June 91, p360-371.
Standard of Care for Delivery of Engineered Products,
James C. Porter, El Apr. 90, p193-201.
Steering Clear of Tort Claims, Daniel S. Turner and Joseph D. Blaschke, CE Zuly 92, p54-56.
Study Looks to the Past to Change the Future, CE Feb.

Liability ins

A Contractor, Acting as an A/E, Can Lose Coverage, CE Sept. 92, p.32. General Liability Doesn't Cover Poor Workmanship, CE

May 92, p28.

Indemnification Clarification, CE Aug. 92, p22. State's Indemnity Laws Unenforceable, CE Jan. 92, p27. Still Working Without a Net, CE Mar. 92, p8.

Existentialism, Engineering, and Liberal Arts, David A. Bella, El July 90, p309-321.

Standard of Care for Delivery of Engineered Products, James C. Porter, El Apr. 90, p193-201.

Licensing
Design and Licensing of the VSC Dry Fuel Storage System, Art J. McSherry, John V. Massey and Boris A.
Chechelnitsky, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1216-1220.
Development of Radioactive Waste Management Licensing Review Assistant, Wei-Chu Yu, Chao-Ming Pong, Ching-Lun Huang and Chen Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p243-249.
Experience with NRC Licensing of a Dual Purpose Cask.

Experience with NRC Licensing of a Dual Purpose Cask, Ivan Stuart, Todd Lesser and Marvin Smith, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1231-1235.

1992, p1631-125. Experience with Spent Fuel Storage Licensing, Frederick C. Sturz, Ralph H. Sievers and John R. Stokley, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

1992), p220-227

Facility Interface Capability Assessment, Thomas E. Pol-log, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p178-182.

The Flow to Licensing Technical Data Tracking and the Licensing Support System (LSS), Jan Statler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2088-2092.

1792, p2u08-2072.
The Importance of the Site for the Safety of a Repository for Spent Nuclear Fuel in Sweden, Tonis Papp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2136-2144.

Legal Logistics of Software Evaluation, Philip Terry, CC May 92, p1,11-13.

May 92, p1,11-13.

Lessons Learned from the Performance Assessment of SKI Project-90, J. Andersson, K. Andersson, S. Norrby and S. Wingefors, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2109-2113.

Lessons Learned from Utility NRC Licensing Experience, Jay E. Silberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p679-684.

Licensing Code-of-Practice, Leonard T. Skoblar, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1055-1061.

icensing Issues: Clarification and Convergence, John P. Roberts, Linda J. Desell, Mary L. Birch, Lester Berkowitz and Joseph F. Bader, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236.

Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, Kenneth P. Baskin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p691-694.

MRS Site Requirements and Considerations and the Potential Influences of Specific Technology Selections, David F. Fenster, John A. Richardson and K. Michael Cline, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p204-211.

Overview of ORIGEN2 and ORIGEN-S: Capabilities and Limitations, C. V. Parks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p57-64.

A Preliminary Report on OCR Problems in LSS Document Conversion, T. A. Nartker, J. Kanal and S. V. Rice, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2106-2108.

Proposed Sealing Field Tests for a Potential High-Level Radioactive Waste Repository in Unsaturated Tuff, Joseph A. Fernandez, John B. Case and Joseph Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2290-2297.

Records Management in Support of the Licensing Process for the High Level Radioactive Waste Facility, Dennis G. Sheats, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2083-2087.

Regulatory Requirements to Address Issues Related to Volcanism and Magmatism: Code of Federal Regulatory, Title 10, Part 60, Disposal of High-Level Radioactive Wastes in Geologic Repositories, John S. Trapp and Philip S. Justus, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2039-2046.

Return to Italy of Vitrified High Level Wastes from U.K.:
Operational and Regulatory Aspects, G. F. Eletti, F. P.
Michetti and M. Tocci, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p256-262.

The Role of ORIGEN-S in the Design of Burnup Credit Spent Fuel Casks, M. C. Brady, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p65-

The Role of the M&O in the High-Level Civilian Radio-active Waste Management System, Roland L. (Robby) Robertson, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2415-2416.

The Role of the Repository Implementer in Providing and Demonstrating Safe Disposal of Radioactive Wastes, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p102-105.

Site Characterization and the Method of Multiple Working Hypotheses, David F. Fenster, K. Michael Cline, John A. Blair and Jane Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

The Software License Minefield, Software Publishers Association, CC June 92, p6-8,14-15.

State Licensing Plan Out of Order, CE July 92, p30.

To Specialize, Engineers Must Return to School, CE Mar.

Transport of Multiassembly Sealed Canisters, R. D. Quinn, R. A. Lehnert and J. M. Rosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2219-2226.

U.S. Department of Energy Issue Resolution Process, Maxwell B. Blanchard, Michael D. Voegele and Miguel A. Lugo, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1062-1066.

Use of Annotated Outlines to Prepare Guidance for Li-cense Applications for the MRS and MGDS, John Roberts and William R. Grifffin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 1040-1045

p1040-1046.

p1040-1040. Validation, Acceptance and Licensing: How Much Scientific Facts Can the Process Digest? Clas-Otto Wene, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p110-115.

Mechanic's Lien Law Applies to Off-Site Work, CE Oct. 92, p28.

Developing Infrastructure Lifecycle Solutions, Steven B. Glimpse and Jeffrey M. Young, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p818-824.

Life-Cycle Considerations in Urban Infrastructure Engineering, David Novick, ME Apr. 90, p186-196.
Life-Cycle Cost Analysis Doesn't Work for Bridges, David Veshosky and Carl R. Beidleman, CE July 92,

po.
Offshore Challenge, Gordon H. Moore and Juan J.
Campo, CE Oct. 92, p48-51.
Pressuremeter and MDD Moduli for Road Design, P. J.

Pressuremeter and MDD Moduli for Road Design, P. J. Sanders, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, p367-381.
Remaining-Life Consideration in Pavement Overlay Design, Tien F. Fwa, TE Nov./Dec. 91, p585-601.
Re-Qualification of Offshore Platforms, R. G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p427-443.
Screening Old Offshore Platforms, Previous Americaches.

Screening Old Offshore Platforms: Previous Approaches and Further Thoughts, Peter W. Marshall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p518-530.

Trouble on the Waterways? Paul Tarricone, CE Feb. 91, p52-55.

V, Robert T. Hudspeth, ed., 1992), p531-545.
Life support systems
Artificial Gravity Augmentation on the Moon and Mars,
Lex Schultheis, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p1738-1747.
Chemical Analysis in Space Exploration: A Lunar-based
Chemical Analysis Laboratory (LBCAL), Mitchell K.
Hobish, Charles W. Gehrke, Cyril Ponnamperuma and
Robert W. Zumwalt, [Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p565-575.
An Integrated Human/Plant Metabolic Mass Balance
Model, A. B. Thompson, J. R. Schulz and C. G. Cooley,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1777-1788.
Internal Pressure in a Lunar Inflatable Structure, Jeffrey

Internal Pressure in a Lunar Inflatable Structure, Jeffrey

nternal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 192), p.2360-2366. JAC: A Closed Ecosystem Research Facility, Derek E. Shipley, Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.1765-1776.

Aussell J. Miller, ed., 1972, pp. 1703-1770.

Lunar Base Pressure, O.; Fraction, and ExtraHabitat Activity Suit Design, George W. Morgenthaler, Edward G. Barrett, Dale A. Fester and Carolyn G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1720-1727.

Medical Care on the Moon, Ron Schaefer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1728-1737.

Power Sources for Lunar Bases, Alastair J. W. Mayer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p763-773.

Pressure Suit Requirements for Moon and Mars EVA's, Eric M. Jones and Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1701-1708.

Regenerative Life Support Technology Challenges for the Space Exploration Initiative, Vincent J. Bilardo, Jr. and Ronald L. A. Theis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1748-1764.

Space Habitat Environmental Health: A Systems Issue, Jon R. Schulz and Ralph N. Eberhardt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2023-2034.

Space Station & Lunar/Mars Life Support Research, Win-ston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1690-1700.

A Systems Approach to Water Recycling Research, Jon Schulz and JoAnn Silverstein, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1996-2007.

Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, D. W. Ming, D. C. Golden and D. L. Henninger, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1709-1719.

## Lifeline syste

Earthquake Countermeasures for Lifelines in the Central and Eastern United States, T. D. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p168-191.

Earthquake Hazard Investigative Procedures for Central United States Waterworks, James R. Blacklock, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), pl-15.

Impact on Water Supply of a Seismically Damaged Water Delivery System, M. Shinozuka, H. Hwang and M. Murata, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p43-57.

Lifeline Earthquake Engineering in the Central and East-ern U.S., Technical Council on Lifeline Earthquake En-gineering Monograph No. 5, Donald B. Ballantyne, ed., 1992, 0-87262-902-3, 200pp.

Regional Evaluation of Transportation Lifelines in New York State with the Aid of GIS Technology, Masanobu Shinozuka, Michael P. Gaus, Seong H. Kim and George C. Lee, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p102-109.

Risk Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, M. A. Cassaro, M. J. Cassaro, R. K. Ragade and S. Alexander, (Lifetiee Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p29-42.

Seismic Hazard Along a Central U.S. Oil Pipeline, How-ard H. M. Hwang, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p110-124.

Seismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, Klaus H. Jacob, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p58-71.

Seismic Mitigation of the Memphis Water System, Kevin M. Poc, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992),

Sensitivity of Lifeline Response to Models for the Spatial Incoherence of the Seismic Ground Motions, Aspasia Zerva, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p560-563.

Transportation Lifeline Losses in Large Eastern Earth-quakes, C. Rojahn, C. Scawthorn and M. Khater, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101.

Lift slab construction

Analysis of Stability of L'Ambiance Plaza Lift-Slab Towers, Piotr D. Moncarz, Roy Hooley, John D. Osteraas and Brant J. Lahnert, CF Nov. 92, p.232-245.

Investigation of L'Ambiance Plaza Building Collapse, Daniel A. Cuoco, David B. Peraza and Thomas Z. Scarangello, CF Nov. 92, p.211-231.

omments on L'Ambiance Plaza Lifting Collar/ Shearheads, William McGuire, CF May 92, p78-85.

Light
The Feasbility of Using Solar Optics for Lunar Base
Lighting, Kyle Williams and David Eijadi, (Engineering, Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p260-275.

Lime

Alkaline Sludge Stabilization Processes Offer Viable
Sludge Management Options, Gary S. MacConnell,
Morris V. Brookhart and Philip E. Smith. (Environmental Engineering: Saving a Threatened Resource—
In Search of Solutions, F. Pierce Linaweaver, ed.,
1992), p394-394.
Chemical Dosing of Small Water Utilities Using Regression Analysis, Glenn W. Ellis, Anthony G. Collins, Xi
Ge and Catherine R. Ford, EE MayJune 91, p308-319.
Stabilizing Compacted Clay Against Chemical Attack,
Gregory P. Broderick and David E. Daniel, GT Oct.
90, p1549-1567.
Three Case Histories of Waste Stabilization, Edward L.

90, p1549-1567.

Three Case Histories of Waste Stabilization, Edward L. Kosinski, David S. Martin and Alan R. Ringen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1261-1272.

TOC Removal by Coagulation and Softening, S. R. Qasim, S. A. Hasham and N. I. Ansari, EE May/June 92, p432-437.

92, p432-437.
Utilization of Carbide Lime Waste in Asphaltic Concrete Mixes, Mohammed H. Al-Sayed, Ismail M. Madany and W. Al-Khaja, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p230-239.
Utilization of Carbide Lime Waste in Cement Mortar Mixes, Waheeb A. Al-Khaja, Ismail M. Madany and Mohammed H. Al-Sayed, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p320-331.

CERF Cosponsors Lime Columns Field Study, NE Aug. 92, p5.

A Geologist's Perspective on Dam Foundation Grouting, Kenneth D. Weaver, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p639-650.

Limit analysis Balanced Seismic Design of Anchored Retaining Walls, G. Neelakantan, M. Budhu and R. Richards, Jr., GT June 92, p873-888.

Bracing Requirements of Plane Frames, Shyi-Lin Lee and P. K. Basu, ST June 92, p1527-1546. Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Far-rag and Victor Elias, GT Jan. 90, p54-72.

rag and Victor Elias, GT Jan. 90, p34-72.

Limit design method

Bearing Capacity on Nonhomogeneous Cohesive Soils
under Embankments, Radoslaw L. Michalowski, GT
July 92, p1098-1118.

Design of Bridge Pier Pile Foundations for Ship Impact,
Bogdan O. Kuzmanovic and Manuel R. Sanchez, ST
Aug. 92, p2151-2167.

Ductile Multiple-Anchor Steel-to-Concrete Connections,
Ronald A. Cook and Richard E. Klingner, ST June 92,
p1645-1665.

Second-Order Inelastic Analysis Methods for Steel-Frame Design, W. S. King, D. W. White and W. F. Chen, ST Feb. 92, p408-428.

Shakedown Limit State of Compact Steel Girder Bridges, M. G. Barker and T. V. Galambos, ST Apr. 92, p986-

Shear Zone Formation and Slope Stability Analysis, Scott E. Shewbridge and Nicholas Sitar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370.

Stability of Embankments over Weak Soils of Limited Thickness, Radoslaw L. Michalowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1142-1152

### Limit equilibri

A Computer Program for the Analysis of Reinforced Soil, F. Reyna, D. Humphrey, B. Christopher and J. L. Chameau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1225-1236.

Ilan Juran, ed., 1992), pl 225-1236.

Design of Anchored Geosynthetic Systems for Slope Stabilization, Roman D. Hryciw and Kamarudin Haji-Ahmad, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 464-1480.

Design of Geosynthetic-Reinforced Soil Structures, Kh. Farrag and I. Juran, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 188-1200.

Discrete Element Method for Slope Stability Analysis, Ching S. Chang, GT Dec. 92, pl 1889-1903.

Generalized Three-Dimensional Slope-Stability Analysis, Dov Leshchinsky and Ching-Chuan Huang, GT Nov. 92, pl 748-1764.

92, p1748-1764.

Geosynthetic Reinforced Soil Structures, Dov Leshchinsky and Ralph H. Boedeker, GT Oct. 89, p1459-1478.

Interactive Slope Analysis Using Spencer's Method, Sunil Sharma and Abdul Moudud, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p506-520.

Interslice Force Functions for Limit Equilibrium Analysis, Harianto Rahardio, Delwyn G. Fredlund and Ker. K. Fan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p325-341.

Retaining Wall With Reinforced Cohesionless Backfill Swami Saran, K. G. Garg and R. K. Bhandar, GT Dec. 92, p1869-1888.

24, p1809-1888.
Slope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867.
Use of Drilled Shafts in Stabilizing a Slope, Lymon C. Reese, Shin-Tower Wang and Jeffrey L. Fouse, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332.

An Advanced First-Order Method for System Reliability, Sankaran Mahadevan and Thomas A. Cruse, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p487-490.

Analytical Aerodynamic Investigation of Cable-Stayed Helgeland Bridge, Imre Kovacs, Holger S. Svensson and Elljarn Jordet, ST Jan. 92, p147-168.

Bayesian Reliability Updating of Existing Steel Girder Bridges, Sami W. Tabsh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p55-58.

Development of a Limit-State Seismic Code for Bridges, lan G. Buckle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p164-167.

First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p531-534.

Cosynthetic Strength—Ultimate and Serviceability Limit State Design, R. J. Fannin and S. Hermann, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1411-1426.

Inelastic Limit States Design. Part I: Planar Frame Stud-ies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

Inelastic Limit States Design. Part II: Three-Dimensional Frame Study, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2590-2568. Limit-State Interactions in Reliability-Based Design for Wood Structures, David Rosowsky and Bruce Ellingwood, ST Mar. 92, p813-827.

Moisture Content and Reliability-Based Design for Wood Members, David V. Rosowsky and Kenneth J. Fridley, ST Dec. 92, p3466-3472. Reliability of Geometrically Nonlinear PR Frames, Achintya Haldar and Yiguang Zhou, EM Oct. 92, p2148-2155.

Shakedown Limit State of Compact Steel Girder Bridges, M. G. Barker and T. V. Galambos, ST Apr. 92, p986-998.

998. Simplified Methods for Assessment of the Structural Integrity of Existing Steel Jacket Platforms in the Gulf of Mexico, Rajiv K. Agarwal, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p750-769. Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-

Structural System Design under Uncertainty Via Pareto Optimization, Dan M. Frangopol and Minoru Iizuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p551-554. Uncertainty and Reliability Analysis of Jacket Platform, A. Olufsen, B. J. Leira and T. Moan, ST Oct. 92, p2699-2715.

Find-Induced Response of Structurally Asymmetric High-Rise Buildings, M. Saiful Islam, Bruce Elling-wood and Ross B. Corotis, ST Jan. 92, p207-222.

Is Advanced Technology "The Gateway to Irresponsibility?" Jon E. Zufelt, El Oct. 89, p434-437.

### Linear analysis

Lisear annyas.
Flexible Membrane Wave Barrier, Gary O. Thompson, Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p129-148.

# ning

Aggregation-Disaggregation Approach to Multireservoir Operation, Juan B. Valdés, Jenny Montbrun-Di Filip-po, Kenneth M. Strzepek and Pedro J. Restrepo, WR July/Aug. 92, p423-444.

Multiobjective Analysis of Multireservoir System, S. Mohan and Diwakar M. Raipure, WR July/Aug. 92,

p336-370.
On-Line Optimal Control of Urban Water Supply, Otto J. Helweg, Shahram Pezeshk and Kenneth E. Oliver, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p532-536.
Optimal Pump Scheduling in Water-Supply Networks, Paul W. Jowitt and George Germanopoulos, WR July/Aug, 92, p406-422.
Optimization Model for Alternative Lies of Different

Optimization Model for Alternative Use of Different Quality Irrigation Waters, Javaid Afzal, David H. Noble and E. K. Weatherhead, IR Mar./Apr. 92, p218-

228.

Planning and Operation of a Multi-Reservoir Water Distribution System, Ali Diba, Peter W. F. Louie, Manouchehr Mahjoub and William W.G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p316-321.

Planning Centralized Materials Recovery Facilities, Renée A. Lawver and Jay R. Lund, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p537-542.

Sability Analysis in Geomechanics by Linear Program-

Stability Analysis in Geomechanics by Linear Programming. II: Application, Poon-Hwei Chuang, GT Nov. 92, p1716-1726.

Stability Analysis in Geomechanics by Linear Programming. I: Formulation, Poon-Hwei Chuang, GT Nov. 92, p1696-1715.

First-Passage Failure Predictions for Yielding Primary-Secondary Systems, David C. K. Chen and Loren D. Lutes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p564-567.

Linear System Spectral Moments Determination, Pol D. Spanos and Scott M. Miller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p192-195.

Nonstationary Response Characteristics of Linear MDOF Systems, K. Papadimitriou and J. L. Beck, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p572-575.

Optimal Linear Segmented Structures with Variable Segment Boundaries, C. J. Goh and C. M. Wang, EM Dec. 92, p2376-2383.

Parameter Estimation in Complex Linear Structures, M. R. Banan, M. Banan and K. D. Hjelmstad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p571-574.

Linearity
Linear Surface Waves Over Rotating Fluids, Ting-Kuei
Tsay, WW Mar/Apr. 91, p156-171.
Linearisation and Offshore Fatigue Reliability, R. E.
Melchers and M. Ahammed, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p5-8.

Liners
The Design of Landfill Slopes, Ibraheem Alshunnar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1232-1243.

Effects of Freezing on Hydraulic Conductivity of Compacted Clay, Woon-Hyung Kim and David E. Daniel, GT July 92, p1083-1097.

GT July 92, p1083-1097.

Hydraulic Conductivity of Landfill Liners Containing
Benzyltriethylammonium-Bentonite, James A. Smith,
Pamela M. Franklin and Peter R. Jaffé, [Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p186-

Interaction of Inorganic Leachate with Compacted Poz-zolanic Fly Ash, Tuncer B. Edil, Linda K. Sandstrom and P. M. Berthouex, GT Sept. 92, p1410-1430. Leakage Mechanism Through Double Liner Systems, Ab-dul R. Mulla Saleh, (Environmental Engineering: Say-ing a Threatened Resource—In Search of Solutions, F. Pierce Linauseur, ed., 1922), p192-200.

Pierce Linaweaver, ed., 1992.), p192-200.
Liner Helps Resort Survive Drought, CE Oct. 92, p88.
Permeation of Organic Chemicals Through HDPE
Geomembranes, Joni P. Sakti, Jae K. Park and John A.
Hoopes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992.), p201-207.
Reliability Model for Soil Liner: Post Construction, I.
Bogardi, W. E. Kelly and A. Bardossy, GT Oct. 90,
p1502-1520.

pl 502-1520.

Resolving Environmental Concerns: Ash Beneficial Reuse, Richard W. Goodwin, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31.

Stability Evaluation of Waste Landfills, Richard A.

Mitchell and James K. Mitchell, (Stability and Performance of Slopes and Embankments II, Raymond B. Sed,
ed. and Ross W. Boulanger, ed., 1992), p1152-1187.

Stabilizing Compacted Clay Against Chemical Attack,
Gregory P. Broderick and David E. Daniel, GT Oct.
90, p1549-1567.

27, p1.349-1307. Trenchless Repair Keeps Sewage and Business Flowing, CE Sept. 92, p94. Water Content-Density Criteria for Compacted Soil Liners, David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830.

Fluctuating Uplift and Lining Design in Spillway Stilling Basins, Virgilio Fiorotto and Andrea Rinaldo, HY Apr. 92, p578-596.

In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p334-339.

Liquefaction

Analysis of Membrane Penetration in Triaxial Test, Steven L. Kramer, N. Sivaneswaran and R. O. Davis, EM Apr. 90, p773-789.

Density Changes During Undrained Loading— Membrane Compliance, Mark D. Evans, GT Dec. 92,

p1924-1936.

p1924-1936.

Design and Performance of Two Port Silos on Improved Ground, M. U. Ergun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p842-854.

Earthquake Countermeasures for Lifelines in the Central and Eastern United States, T. D. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p168-191.

Earthquake Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Ger-ald M. Serventi and Larry L. Scheibel, (*Ports '92*, David Torseth, ed., 1992), p429-442.

Effects of Liquefaction on Lateral Pile Responses, T. Ka-gawa, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p207-223.

The Mechanical Aging of Soils, John H. Schmertmann, GT Sept. 91, p1288-1330.

Membrane Compliance and Liquefaction of Sluiced Gravel Specimens, Mark D. Evans, H. Bolton Seed and Raymond B. Seed, GT June 92, p856-872. Minimum Undrained Strength of Two Sands, J.-M. Kon-rad, GT June 90, p932-947.

Minimum Undrained Strength Versus Steady-State Strength of Sands, J. -M. Konrad, GT June 90, p948-963.

Modeling of Lateral Spreads in Silty Sands by Sliding Soil Blocks, Ricardo Dobry and Mohammad H. Baziar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p625-652.

Piles Under Dynamic Loads, Geotechnical Special Publi-cation No. 34, Shamsher Prakash, ed., 1992, 0-87262-905-8, 270pp.

Post-Earthquake Slope Stability of Two Dams with Liquefied Gravel Foundations, D. W. Sykora, J. P. Koester, R. E. Wahl and M. E. Hynes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005. 1005.

Seismic Hazard Analysis for Crude Oil Pipelines in the New Madrid Seismic Zone, Michael J. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p125-139.

Seismic Repair at Seventh Street Marine Terminal, John A. Egan, Robert F. Hayden, Larry L. Scheibel, Mahmut Otus and Gerald M. Serventi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p867-878.

Holtz, ed. and Ilan Juran, ed., 1992), p867-878. Seismic Retrofit Analysis of a Homogeneous Earthfill Dam, Suji Somasundaram, Kris S. Khilnani and Geof-frey R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p669-684. Seismic Stability and Permanent Deformation Analyses: the Last Twenty Five Years, W. F. Marcuson, III., M. E. Hynes and A. G. Franklini, (Stability and Perform-ance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p552-592. Shallow Soil Mixing—A Case History. David Broomhead

ed. and Ross W. Boulanger, ed., 1792, p. 252-392.
Shallow Soil Mixing—A Case History, David Broomhead
and Brian H. Jasperse, (Grouting, Soil Improvement
and Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p564-576.
Soil-Pile-Superstructure System in Liquefaction, S. Yao
and K. Kobayashi, (Piles Under Dynamic Loads,
Shamsher Prakash, ed., 1992), p241-255.

Snamsner Frakash, ed., 1992), p.241-235.
Sabilization of Tablachaca Dam Landslide, Richard A.
Millet, Gil M. Lawton, Pedro C. Repetto and Vinod K.
Garga, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p.1365-1381.
Static Landslitte and Landslitte Static Landslitte.

Static Instability and Liquefaction of Loose Fine Sandy Slopes, Poul V. Lade, GT Jan. 92, p51-71.

Steady-State Strength Analysis of Lower San Fernando Dam Slide, Gonzalo Castro, Raymond B. Seed, Thom-as O. Keller and H. Bolton Seed, GT Mar. 92, p406-

Structural Materials from Lunar Simulants Through Thermal Liquefaction, Chandra S. Desai and Kirsten Girdner, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 9528-536.

Russell J. Miller, ed., 1992, p.526-330.
Uncertainty in Steady State Liquefaction Evaluation Procedures, Steven L. Kramer, GT Oct. 89, p1402-1419.
Undrained Shear Strength of Liquefied Sands for Stability Analysis, Timothy D. Stark and Gholamreza Mesri, GT Nov. 92, p1727-1747.

G1 Nov. 92, pp. 121-1747.
The Use of Vibro Systems in Seismic Design, Roberto A.
López and Robert F. Hayden, (Grouting, Soil Improve
ment and Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and lian Juran, ed., 1992), pl. 433-1445.
Wave-Induced Effective Stress in Seabed and Its Momentary Liquefaction, Testsuo Sakai, Katsuya Hatanaka
and Hajime Mase, WW Mar./Apr. 92, p. 202-206.

Liquid limit
Critical Reappraisal of Colloidal Activity of Clays, N. S.
Pandian and T. S. Nagaraj, GT Feb. 90, p285-296.
Equations for Compression Index Approximation, A. W.
N. Al-Khafaji and O. B. Andersland, GT Jan. 92, p148-135.

Liquids
Control of Along-Wind Response of Structures by Mass and Liquid Dampers, Y. L. Xu, B. Samali and K. C. S. Kwok, EM Jan. 92, D20-39.

Kwok, EM Jan. 92, D20-39.

Kwok, EM Jan. 92, p20-39.

Eliquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p784-789.

Evaluation of Collection-Well Parameters for DNAPL, K. Schmidtke, E. McBean and F. Rovers, EE Mar./Apr. 92, p183-195.

Fiber Optics Detect Contaminants, CE Dec. 92, p8.
Theory and Experiments on Subsurface Contaminant
Sorption Systems, Kirk Hatfield, David Burris, Thomas B. Stauffer and Joe Ziegler, EE May/June 92, p322337.

Litigation

A/E or Contractor Liability? Michael C. Loulakis and William L. Cregger, CE Jan. 92, p35. The Development of the Construction Engineer: Past Progress and Future Problems, John W. Fondahl, CO Sept. 91, p380-392.

Howdy, Partner, Paul Tarricone, CE Mar. 92, p72-74. riowdy, Partner, Paul Tarricone, CE Mar. 92, p72-74.
Implementation of Material Requirements in Specifications, Harvey C. Beckham and John R. Smith, (Materials: Performance and Prevention of Deficiencies and
Failures, Thomas D. White, ed., 1992), p428-433.
Improper Uses of Construction Specifications, Bryce
Simons, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),
p316-324.

Nassau County Sludge Management Multi-Phased Envi-ronmental Assessment, Steve Fangmann, John Pascuc-ci, Thomas Immerso, Carl Koch and Darlene McKin-ney, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274.

Resolving Contract Disputes Based on Differing-Site-Condition Clause, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Dec. 92, p767-779.

779.
San Francisco Bay Area's Experience Developing Transportation Control Measures for Air Quality Plans, Thomas Perardi, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p56-63.
The Status of Yucca Mountain Site Characterization Activities, Carl P. Gertz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p748-750.
Tort Reform and Design Professional, Dennis R. Schapker, El July 90, p258-265.

Barbers Point Harbor: A Unique Solution for Port Up-grade, Michael J. Briggs and Eivind Bratteland, (Ports '92, David Torseth, ed., 1992), p777-790.

Application of a Beach Plan Evolution Model in Sergipe, Brazil, Otavio J. Sayao and K. C. Ander Chow, (Coast-al Engineering Practice '92, Steven A. Hughes, ed., 1992), p234-250.

1992), p234-250.

Design Considerations for Small Artificial Islands in Franks Tract, California, Craig H. Everts, Vedat Demirel, Russell H. Boudreau, Emy T. Carpenter and Richard Dornhelm, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p779-793.

Hampton, New Hampshire: Beach Nourishment Project, Franklin W. Fessenden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p60-72.

Longshore Sediment Transport Rate at Morro Bay, CA, James M. Kaihatu, Chris Andrassy and Edward F. Thompson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p615-631.

Numerical Beach Profile Modelling for Beachfill Projects, Robert B. Naim and Keith J. Riddell, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p12-28.

Live loads
Calibration of Redundancy Factors for Highway Bridges, Michel Ghosn and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p344-347.
Design Live Loads for Coherent Crowd Harmonic Movements, A. Ebrahimpour and R. L. Sack, ST Apr. 92, p1121-1136.
Effects of Dead Loads in Dynamic Plates, Hideo Takabatake, ST Jan. 92, p34-51.
Field Test of 72-in-Diameter Cast-in-Place Nonreinforced Concrete Pipe, Curtias W. Gilley, Lester H. Gabriel and Robert S. Standley, TE Jan./Feb. 92, p1-19.
Ploor Live Load Models and Pattern Load Effects, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p503-506.
Live Load Models Based on WIM Data Andrei of

Live Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nassif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

Live-Load Moments for Continuous Skew Bridges, Mohammad A. Khaleel and Rafik Y. Itani, ST Sept. 90,

p2361-2373

p. 201-2373.

Truck Loading Data for a Probabilistic Bridge Live Load Model, Dan M. Frangopol, George G. Goble and Nurhan Tan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-343.

Load combinations
Design of Piles in Permafrost Under Combined Lateral
and Axial Load, A. Foriero and B. Ladanyi, CR Sept.
91, p89-105.

91, p89-103.
Howe Truss Behavior Interpreted by Deflections, Zbigniew Cywiński, Marek Jasina and Stefan Niewitecki, CF Aug. 92, p151-160.
Macro Wind Parameters for Load Combination, Christopher A. Belk and Richard M. Bennett, ST Sept. 91, p2742-2756.

p2142-2736. Square and Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Mar. 92, p648-668.
T-Joints in Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Aug. 91, p2258-2277.

Load criteria
Codification of Design Load Criteria Subject to Modeling
Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007.

Load askribution for Multipresence of Vehicles, Baidar Bakht and Leslie G. Jaeger, ST Mar. 90, p603-618. Classical Buckling Load of Spherical Domes Under Uniform Pressure, Haruo Kunieda, EM Aug. 92, p1513-1525.

1925.

Pynamic Response of Multigirder Bridges, Ton-Lo Wang, Dongzhou Huang and Mohsen Shahawy, ST Aug. 92, p.2222-2238.

Floor Live Load Models and Pattern Load Effects, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p503-

Refined Analysis of Load Distribution Factors for Bridges, M. A. Issa, Huiming Li, M. Arockiasamy, M. Shahawy and M. Issa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p260-263.

p200-263. Stability of Column Lowered Into Liquid of Higher Density, C. Y. Wang, EM Jan. 92, p204-210. Ultimate Load Test of Slab-on-Girder Bridge, Baidar Bakht and Leslie G. Jaeger, ST June 92, p1608-1624. Wheel Load Distribution in I-Girder Highway Bridges, Kassim M. Tarthini and Gerald R. Frederick, ST May 92, p1285-1294.

Load duration
Hygrothermal Effects on Load-Duration Behavior of
Structural Lumber, Kenneth J. Fridley, R. C. Tang,
Lawrence A. Soltis and Chai H. Yoo, ST Apr. 92, p1023-1038.

p1025-1038.
Load Duration and System Effects in LRFD for Wood Construction, David V. Rosowsky and Bruce R. Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p78-81.
Load-Duration Effects in Structural Lumber: Strain Energy Approach, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Sept. 92, p2351-2369.

Load factors

ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1056-1070.

Bolted Connections in Wood under Bending/Tension Loading, R. Davalos-Sotelo and P. J. Pellicane, ST Apr. 92, p999-1013.

32, 1999-1013.

Buckling Analysis of Structures Composed of Tapered Members, Siu Lai Chan, ST July 90, p1893-1906.

Dynamic Elastic-Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. 92, p.2005-2016.

Economical LRFD Composite-Beam Design from HESCO, John Cook and Roger Blais, CC May 92, pl-

HESCO, John Cook and Roger Blais, CC May 92, pl-3,7-11.

Quidelines for Design of Cable-Stayed Bridges, ASCE Committee on Cable-Stayed Bridges, (Man-Chung Tang, chm.), 1992, 0-87262-900-7,70pp.
Inelastic Limit States Design. Part 1: Planar Frame Studies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

Inelastic Limit States Design. Part II: Three-Dimensional Frame Study, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2550-2568.

Structural Reliability and Proof Testing for Highway Bridges, Gongkang Fu and Jianguo Tang, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p348-351.

Load resistance
QLRS: An Approach for Qualitative Interpretation of
Lateral Load Resisting Systems, Renate Fruchter and
Helmut Krawinkler, (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992),

p233-200.

Load resistant design factor

Load Duration and System Effects in LRFD for Wood

Construction, David V. Rosowsky and Bruce R. Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p78-81.

Reliability-Based Specification for Engineered Wood

Construction, James R. Goodman, Allan G. Burk and

David G. Pollock, (Probabilistic Mechanics and Struc
tural and Geotechnical Reliability, Y. K. Lin, ed.,

1992), p73-77.

ond tests

Load tests
An Accelerated Pavement Testing System, Thomas D.
White, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.
Eaton, ed., 1992), pl 12-124.
Bearing Capacity of Auger-cast Piles in Sand, William J.
Neely, GT Feb. 91, p331-345.
Bearing Capacity of Expanded-Base Piles in Sand, William J. Neely, GT Jan. 90, p73-87.
Bearing Capacity of Expanded-Base Piles with Compacted Concrete Shafts, William J. Neely, GT Sept. 90, p1309-1324.
Citical Stresses in Pille. Weldment and Ton Head of

pl 309-1324.
Critical Stresses in Pintle, Weldment and Top Head of Nuclear Waste Container, Samaan G. Ladkany and Brett R. Kniss, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 253-1260.
Design of Socketed Drilled Shafts in Limestone, M. C. McVay, F. C. Townsend and R. C. Williams, GT Oct. 92, pl 626-1637.
Fine Ottawa Sand: Experimental Behavior and Theoretical Predictions, Panos Dakoulas and Yuanhui Sun, GT Occ. 92, pl 906-1923.
Improved Design Procedures for Vertically Loaded H-Piles in Sand, Harry M. Coyle and Ronald Ungaro, GT Mar. 91, p307-528.
Load Transfer for Pipe Piles in Highly Pressured Dense

Mar. 91, p507-528.

Load Transfer for Pipe Piles in Highly Pressured Dense Sand, Michael W. O'Neill and Richard D. Raines, GT Aug, 91, p1208-1226.

A Method for Estimating the In Situ Cohesion of Cemented Conglomerate, Edward A. Nowatzki and David Kidd, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, p188-174.

Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, Kevin A. Pierce and Lazzlo Buzari, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p663-679.

Performance of Precast Driven Piles in Marine Clay,

Performance of Precast Driven Piles in Marine Clay, Chun F. Leung, R. Radhakrishnan and Siew-Ann Tan, GT Apr. 91, p637-657.

Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hult-gren, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p775-787.

Performance of Visiduct Girders under Static and Dynamic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Pier and Wharf for U.S. Navy Homeport, Everett, Arrinn Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (Ports '92, David Torseth, ed., 1992), p616-629.

p616-629.

Pipeline Storm Behavior on Clay Soils, Derek V. Morris, Tony S. Yen, Wayne A. Dunlap and James R. Hale, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p560-570.

Rate Effects in Uniaxial Dynamic Compression of Concrete, Tianxi Tang, Lawrence E. Malvern and David Ajenkins, EM Jan. 32, p108-124.

Structural Characterization of an Articulated-Truss Joint, Thomas R. Sutter, K. Chauncey Wu, Kevin T. Riutort, Joseph B. Laufer and James E. Phelps, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1392), p296-307.

Ultimate Bearing-Capacity Tests on Sand with Clay Layer, Masanobu Oda and Soe Win, GT Dec. 90, p1902-1906.

Layer, Mass p1902-1906.

p1902-1906.

Ultimate Load Test of Slab-on-Girder Bridge, Baidar Bakht and Leslie G. Jacger, ST June 92, p1608-1624.

Upper Bound Limit Analysis of Deep Skirt Structures' Foundations, Andrew V. Maller and James D. Murff, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p571-584.

Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.

oad tests, foundations arge-Scale Loading Tests of Shallow Footings in Pneu-matic Caisson, Osamu Kusakabe, Yoshito Maeda and Masatoshi Ohuchi, GT Nov. 92, p1681-1695.

Masatoshi Ohuchi, GT Nov. 92, p1681-1695.
Load transfer Performance of Two Piles Using Pressuremeter Method, Roger Frank, Nicholas Kalteziotis, Michel Bustamante, Stavros Christoulas and Haralambos Zervogiannis, GT May 1, p695-713.
Field Instrumentation and Performance Monitoring of Rigid Pavements, Raymond S. Rollings and David W. Pittman, TE May/June 92, p361-370. Wall Design of Light-Frame Structures, Bohumil Kasal and Robert J. Leicht, ST Dec. 92, p3350-3361.
Load Transfer for Pipe Piles in Highly Pressured Dense

Load Transfer for Pipe Piles in Highly Pressured Dense Sand, Michael W. O'Neill and Richard D. Raines, GT Aug. 91, p1208-1226.

Aug. 91, p1208-1226.
Micromechanical Simulation of Wave Propagation in Dense Granular Assemblies, J. S. Lee, M. Y. Ma and A. B. Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p417-420.
Nonlinear Modeling of Truss-Plate Joints, Leslie Groom and Anton Polensek, ST Sept. 92, p2514-2531.
Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.

Loading
Analysis of the Georgia Dome Cable Roof, Gerardo Castro and Matthys P. Levy, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p566-573.

Bulk Commodity Terminals—Planning for the Future Competitive and Environmental Challenges, Gordon W. Zonailo, (Ports '92, David Torseth, ed., 1992), p695-708.

po95-708. Contact Induced Damage, Leon M. Keer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p502-505.
Dugdale Model Applied to Crack Interactions, K. Shah, H. Stolarski and J. F. Labuz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 9498-501.

Fatigue Life of Offshore Steel Structures Under Stochas-tic Loading, Henning Agerskov and Niels Thougard Pedersen, ST Aug. 92, p2101-2117.

Fatigue of Welded Cruciforms Subjected to Narrow-Band Loadings, S. Sarkani, D. P. Kihl and J. E. Beach, EM Feb. 92, p296-311.

Floating or Fixed Dock for RO/RO Ship Operations, Bankim Mallick and Curtis L. Ratcliffe, (Ports '92, David Torseth, ed., 1992), p709-722.

High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheiuman, EM May 92, p1026-1043.

The Human Side of Systems, Harold E. (Smoke) Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1534-1541.

Impact of Flow Variability on Error in Estimation of Tributary Mass Loads, Stephen D. Preston, Victor J. Bierman, Jr. and Stephen E. Silliman, EE May/June 92, p402-419.

p402-419.

Properties of Aggregate-Cement Interface for High Performance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p832-855.

Radiation Measurements for Verifying the Loading of Burnup Credit Casks, Ronald I. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), n2161-2162. p2161-2164.

p.2101-2104.
Studge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Balog, Manu A. Patel and Turgay M. Ertugrul, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.303-308.

Soil Behavior from Unconventional Loading Conditions, Kamal Tawfiq, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p272-

273.
Stochastic Modeling of Fatigue Crack Growth with Retardation, Dhirendra Verma, Dario A. Gasparini and Fred Moses, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p433-436.
Stresses in Open Section Fiber Reinforced Composite Beams Under Constant Shear Loading, Albert G. Zvarick and Thomas A. Cruse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1067-1070.

Stresses Induced by Surficial and Deep Loading in Elastic Medium, Olivier Rossa and Gabriel Auvinet, GT Aug.

92, p1241-1246.

West Point Temporary Construction Dock, Chris Sundberg and Jerry Stubbs, (Ports '92, David Torseth, ed., 1992), p723-736.

Loading machines
Vacuum Alumina Unloader for Port of Everett, Curtis O.
Hecla, (Ports '92, David Torseth, ed., 1992), p143-149.

oading rate

Size, Temperature and Rate Effects on the Fracture Toughness of Saline Ice, Samuel J. DeFranco and John P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p264-267.

Advanced Structures in Very Deep Water, Richard J. Sey-mour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952. Arc-Length Method for Passing Limit Points in Structural Calculation, W. F. Lam

Behaviour of Prestressed Concrete End Blocks, T. J. Ibell and C. J. Burgoyne, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p135-

Bending of Thin Plate with Three-Point Support, Alexan-der Azarkhin, ST May 92, p1416-1419. Classical Buckling Load of Spherical Domes Under Uni-form Pressure, Haruo Kunieda, EM Aug. 92, p1513-

1525.
Computer Analysis of the East Huntington Cable-Stayed Bridge, Hany J. Farran and William Lai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p687-694.
Conceptual Design of Modules for a Lunar Base, Edward R. Haninger and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p100-111.

reep Recovery of Prepacked Aggregate Concrete, Abu S. M. Abdul Awal, MT Aug. 92, p320-325.

Deflections of Beams with Varying Rectangular Cross Section, Filippo Romano and Gaetano Zingone, EM Oct. 92, p2128-2134.

Section, Filippo Romano and Gaetano Zangone, Em Oct. 92, p2128-2134.

Design Implications of Measured Pressures and Strains in Silos, Geoffrey E Bight, ST Oct. 92, p2729-2742.

Design Loads for Sloshing in TLP Pontoons Tanks, Stephen W. Balint, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p99-113.

Effect of Tire Parameters on Pavement Damage and Load-Equivalency Factors, Peter E. Sebaaly and Nader Tabatabase, TE Nov./Dec. 92, p805-819.

Equivalent Statistical Quadratization of Nonlinear Hydrodynamic Loads on TLPs, Ahsan Kareem and Yousun Li, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p890-905.

Fatigue Strength of Welded Joints Under Broadband Loadings, David P. Kihl, Shahram Sarkani and James A. Kuny, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p426-431.

431.
Guidelines for Design of Cable-Stayed Bridges, ASCE Committee on Cable-Stayed Bridges, (Man-Chung Tang, chmn.), 1992, 0-87262-900-7, 70pp.
Instrumentation for a Full-scale Pavement Test in the Danish Road Testing Machine, Jørgen Krarup, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p96-111.

Integrated Physical Model for Cylindrical Shells, Demetres Briassoulis, ST Aug. 92, p2168-2185.

Limiting Design Parameters for Accelerated Pavement-Testing System, T. D. White, J. M. Albers and J. E. Haddock, Sr., TE Nov/Dec. 92, p787-804.

Linear System Spectral Moments Determination, Pol D. Spanos and Scott M. Miller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p192-195.

Load-Space Formulation for Time-Dependent Structural Reliability, R. E. Meichers, EM May 92, p853-870.

Measurement of Airfield Pavement Response Under Moving Aircraft Loads, Dennis R. Hiltunen and Albert J. Bush, III., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p336-351.

Mechanical Characterization of the Soft Tissue in Horse Hooves, Harry A. Hogan and David M. Hood, (Engineering Mechanics, Loren D. Luttes, ed. and John M. Niedzwecki, ed., 1992), p147-150.

Modal and Wave Load Identification by ARMA Calibration, Jakob Laigaard Jensen, Poul Henning Kirkegaard and Rune Brincker, Jem June 92, p1268-1273.

A Non-Gaussian Fatigue Model for Offshore Structures and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p463-466.

Pre-Eavelope Covariance Differential Equations, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Structures, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, S. K. Lin, ed., 1992), p463-466.

Pre-Envelope Covariance Differential Equations, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p180-

Jualitative Evaluation of Preliminary Structural Designs, Luis M. Bozzo and Gregory L. Fenves, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p89-96.

ed., 1992), 589-96.

Reliability Analysis of Lunar Structures Under Meteoroid Impact, William M. Bulleit and Eric P. Steinberg, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p9-12.

Reliability Analysis of Uncertain Systems Under Random Loadings, Rwey-Hua Cherng and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability- N. K. Lin, ed., 1992), p49-52.

Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, R. H. Sues and L. A. Twisdale, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p511-514. p511-514.

p511-514.

Response of Secondary Systems to Short Duration Stochastic Input, R. Sinha and T. Igusa, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p447-450.

Responses of Bilinear and Impacting Systems Subjected
to Regular Waves, Somchai Sumanuskajonkul and
Sau-Lon James Hu, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p196-

Sampling Techniques for Time-Variant Reliability Prob-lems, R. E. Melchers, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p100-103.

A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradiwarter, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p69-72.

car Retiability, 1. K. Lin, ed., 1992), p09-72.
Serviceability Analysis of Wood Beams with Creep,
David V. Rosowsky, Kenneth J. Fridley and Timothy
A. Philpot, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90.
Some Remarks on BK-Models for Fatigue Crack Growth,
M. M. Rocha and G. I. Schuëller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p316-319.
Stability of Systems of Rigid Bodies by Bounding Theo-

Stability of Systems of Rigid Bodies by Bounding Theorems, Thomas E. Boothby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p904-907.

A Stochastic Approach to the Fatigue Reliability, Yuan Jie Lua, Wing Kam Liu and Ted Belytschko, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p324-327.

Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H.-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

Vibration of Beams and Trashracks in Parallel and In-clined Flows, Thang D. Nguyen and Eduard Naudasch-er, HY Aug. 91, p1056-1076.

Wheel Load Distribution in I-Girder Highway Bridges, Kassim M. Tarhini and Gerald R. Frederick, ST May 92, p1285-1294.

Local area networks

LAN Ho! Structural Analysis on a Network, Suresh K. Sharma and John W. Baugh, Jr., (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p639-646.

Trend in Local Area Network Utilization, Luh-Maan Chang and Li-Chung Chao, ME Jan. 92, p27-39.

The Application and Use of Impact Fees: Legal Issues, Charles L. Siemon, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p238-243.

ROUphall, et. and 1. C. Sutaria, etc., 1972, p. 250-243.
A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, K. Branch, N. Coburn, G. Curtis, J. Holm and S. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1002): 125-160. 1992), p156-160.

Elements of Effective State Land-Use Planning Policy, Arthur C. Nelson, UP Sept. 92, p97-105.

Artinut. Neison, Or Sept. 92, p97-103.

A Guideline for Determining Minimum Threshold Requiring Traffic Impact Studies, Anthony A. Saka, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6-10.

Pay As You Grow, Teresa Austin, CE Feb. 92, p64-65. Small Systems Struggle, John Prendergast, CE Jan. 92, p40-43.

ater Management Under Drought Conditions: An Overview of Practices by Non-Federal Entities, Darrell G. Fontane and Donald Frevert, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p354-359. Water Mana

Effects of Footing Location on Bridge Pier Scour, J. Sterling Jones, Roger T. Kilgore and Mark P. Mistichelli, HY Feb. 92, p280-290.

A Fast Algorithm for the Rectilinear Single Facility Loca-tion Problem, G. L. Xue and J. B. Rosen, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1113-1120.

Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

A Shell Approach to Modeling Oil Spill Trajectory and Fate and Search and Rescue Operations, M. L. Spauld-ing, E. Howlett, K. Jayko, E. Anderson and T. Isaji, (Es-tuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p157-174.

Corps Chooses Precast Panels for Lock Rehab, CE July 92, p19-20.

Hydraulic Structures Versus Zebra Mussels, John J. Ingram and Andrew C. Miller, (Hydraulic Engineering Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611.

Nonlienar, Incremental Analysis of Olmsted Locks, Chris A. Merrill and Sharon B. Garner, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p921-928.

Trouble on the Waterways? Paul Tarricone, CE Feb. 91, p52-55.

Logging
Artificial Recharge Feasibility Evaluation by Field Investigation, Maury E. Ford, Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Soott Keys, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647.

Logic programming languages

Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992, 0-87262-892-2,

Statically Determinate Trusses Programmed in Logic, Vlasis K. Koumousis and Panos G. Georgiou, CP Oct. 92, p435-455.

Logistics

Advanced Construction Management for Lunar Base Construction—Surface Operation Planner, Robert P. Kehoe, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p. 1546-1556.

Russell J. Miller, ed., 1992, p. 1346-1356.

Assessment of a SSF Servicing Facility, Rohan Zaveri, Scott Geels, Erlinda Kiefel, Dan Uhlig and Benton Clark, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 1668-1679.

Construction Challenges on Planetary Surfaces, H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p458-468.

Evaluating Lunar Base Conceptual Designs, Brent Heleckson, Richard Johnson and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p213-223.

Launching Facility Constraints on the Space Exploration Initiative, Kadett Chan and Alex J. Montoya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2044-2055.

Manhattan Post Office Enguifs a Whole City Block, CE Jan. 92, p13-14.

Mobile Continuous Lunar Excavation, John L. Paterson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1070-1079.

SEI In-Space Operations and Support Challenges, Ronald Caldwell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 476-1487.

U.S. Navy Deployable Waterfront Facility, Glenwood Bretz, Julio Giannotti and Arturo Calisto, (Ports '92, David Torseth, ed., 1992), p520-534.

Open Boundary Condition for Multiple Level FE Tidal Current Flow Analysis, Toshio Kodama and Mutsuto Kawahara, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p442-447.

Propagation of Long Waves Onto Shelf, Derek G. Goring and Fredric Raichlen, WW Jan./Feb. 92, p43-61.

Loss Accounting Principles With Emphasis on Bridge Failure, Hal Cochrane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Simple and Accurate Friction Loss Equation for Plastic Pipe, R. D. von Bernuth, IR Mar./Apr. 90, p294-298.

Jefferson Parish Storm Water Management, Marnie Win-ter and Kent Dussom, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p457-461.

The Proposed Waste Management Plan for Dairy Farm Wastes Polluting the Tangipahoa River and Lake Pontchartrain, Gianna M. Jones, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p656-661.

A Stochastic Water Quality Model for Urban Watersheds, D. E. Barbé, J. F. Cruise and X. Mo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p791-796.

7-Day 10-Yr Low Flow Relationships for Ungauged Sites in Central Italy, Piergiorgio Manciola and Stefano Casadei, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p230-256.

Modeling Low-Flow Mixing through Pools and Riffles, Il Won Seo and W. Hall C. Maxwell, HY Oct. 92, p1406-

### Low head

Case Studies of Semi-Closed Pipeline Systems for Flexi-ble Deliveries, John L. Merriam, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p468-473.

Analysis of Evaporative Flux Data for Various Climates, Gabriel G. Katul, Richard H. Cuenca, Philippe Grebet, James L. Wright and William O. Pruitt, IR July/Aug. 92, p601-618.

Hydraulic Conductivity of Three Landfill Clay Liners, Mark E. Gordon, Paul M. Huebner and Thomas J. Miazga, GT Aug. 89, p1148-1160.

Water Quality Implications of Encapsulated Atrazine, Adel Shirmohammadi, Timothy J. Gish and Raviraj Vyravipillai, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p425-430.

# Machine foundations

Stiffness Coefficients of Layered Soil Systems, A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624.

# Machinery

August 2015 August

Machine Learning in Knowledge Acquisition, Tomasz Arciszewski and Wojciech Ziarko, (Knowledge Acquisi-tion in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p50-68.

Lewis A. Rossman, ed., 1972, p. 1970.

A Mars I Watt Vortex Wind Energy Machine, Michael Ralston, Christopher Crowley, Ronald Thomson and Owen Gwynne, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-797.

Mechanical Excavation of Roadways and Chambers in Hard Rock, Neil J. Dahmen and John Turner, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1507-1515.

Modal and Response Analyses of a Paper Machine Foun-dation, Jerry Chen and J. A. Bohinsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p574-581.

Spiral Mining for Lunar Volatiles, H. H. Schmitt, G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170.

Miller, ed., 1992.), p1162-1170.
TBM Performance Prediction in Yucca Mountain Welded Tuff From Linear Cutter Tests, Richard Gertsch, Levent Ozdemir and Leslie Gertsch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1516-1520.

Robert A. Hall and Patricia A. Green, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1150-1161.

1992], pl.130-1101.
Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, Kalyan K. Bhattacharyya, Richard McDonald and Robert S. Saunders, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl.521-1526.

Magnetic field effects

Magnetic Itela effects Destabilizing Effect of Magnetic Damping in Plate Strip, Jong S. Lee, EM Jan. 92, p161-173.
Principles of Ground Modification with Electromagnetic Waves, J. C. Santamarina and Y. N. Wakim, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1380-1392.

Magnetic levitation trains
A New Era In Transportation, John Prendergast, CE Apr.
92, p38-41.

Start-Ups, CE Aug. 92, p8.

# Maintenance

Maintenance

Maintenance

Maintenance

Maintenance

Reassessment, C. R. Attaway, L. G. Medley,
R. B. Pope, L. B. Shappert and A. C. Williamson, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p.1336-1342.

Army Water Supply Management System for Installations Drinking Water Facilities, Hany H. Zaghloul,
Fadi A. Karaa, Jocelyn Clark and Matthew Korfist,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p.145-152.

Assessment of a SSF Servicing Facility, Rohan Zaveri,
Scott Geels, Erlinda Kiefel, Dan Uhlig and Benton
Clark, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p.1668-1679.

Design and Maintenance Factors Affecting Application
Uniformity of Low Pressure Center-Pivot Irrigation
Systems, Brian K. Briggs, K. James Fornstrom and Larry Pochop, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman,
ed., 1992), p.257-262.

Design and Maintenance of Rural Water Supply Systems
for Improved Performance, Paul D. Robillard and
Ronald L. Droste, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p.523-328.

Dredged Material Placement Techniques—A Review of
Its Past, Present and Future, John B. Herbich and R.

Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992), p548-562.

p548-562.

Dusty Roads? Just Beet It, CE Nov. 92, p10.

EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1656-1667.

Expert System for Wastewater Collection System Infiltration and Inflow Mitigation, Fadi A. Karaa, Hany H. Zaghloul and Richard Scholze, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p121-128.

1992), p121-126.
Fatigue/Fracture Reliability and Maintainability of Structural Systems: A Method of Analysis, C. J. Kung and P. H. Wirsching, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Guidelines for Rehabilitation of Civil Works of Hydro-electric Plants, Format: unbound, three-hole punched, Task Committee for the Preparation of Guidelines for Rehabilitation of Civil Works of Hydroelectric Plants, Hydropower Committee, American Society of Civil Engineers, (Ashok K. Rajpal, chmn.), 1992, 0-87262-889-2, 247pp.

889-2, 247pp.
The Importance of Verified Simulation Model in a Sewerage Rehabilitation Program, Phil Wildbore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p730-735.
INFO: An Information Framework for Facility Operators, James P. Beckett and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p57-64.

In-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transpor-tation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-234.

Inventory of Highway Infrastructure Problems Through Bridge Inspection, Enno Koehn and N. A. Barroeta, El Apr. 91, p133-149.

Issues Influencing Colocation and Integration of Cask Maintenance and MRS Facilities, John A. Richardson, David E. Borchardt and Christopher Charles, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1883-1888.

Markov Decision Processes in Structural Optimization, Zongwei Tao, J. Hugh Ellis and Ross B. Corotis, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-542.

Reliability, Y. K. Lin, ed., 1992), p539-542.
A New NDT Device for Comprehensive Pavement Maintenance (Theoretical Aspects), S. Nazarian and M. Baker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p948-951.
Object Oriented Spacecraft Architecture, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2328-2337.
On Deciding Between the Lie of Engineering Standards

On Deciding Between the Use of Engineering Standards and Risk Analysis, George W. Annandale, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p219-235.

KNIV, ed., 1992), p219-233.
Operations Planning for Space Station FREEDOM—and Beyond, Stephen S. Gibson, Thomas E. Martin and H. Jeffrey Durham, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1500-1511.
Participative Process in Tube Well Irrigation Development, Manuel Olin, IR Nov./Dec. 92, p882-894.

Pavement Surface Maintenance: Overview of SHRP H-106 Experimental Installations, Russell Romine, David Peshkin, Kelly Smith and Tom Wilson, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p146-159.

Performance of Orthotropic Bridge Decks, Ali Touran and Alex Okereke, CF May 91, pl 34-148.

Principles of Holistic Medicine Applied to Infrastructure Maintenance: A Test Case, Fred Catapano, CE Jan. 92, p68-69.

Probabilistic Methods in Hydroproject Maintenance, Walter O. Wunderlich, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992). p514-519.

Re-Qualification of Offshore Platforms, R. G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p427-443.

1992), p427-443.
Role of Land Information System in Operation and Maintenance of Irrigation Systems Bureau of Reclamation, James B. Robertson and Sharen L. Wood, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Enguan, ed., 1992), p317-322.
Role of the Coastal Engineer in Civil Engineering Practice, ASCE Coastal Engineering Technical Committee, ed., 1992), p918-934.
Roof Management Alternatives for Asing Laugeh Infra-Roof Management Alternatives for Asing Laugeh Infra-

Roof Management Alternatives for Aging Launch Infra-structure, Dennis Firman, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2056-2063.

Scheduling Maintenance Dredging on Single Reach with Uncertainty, Jay R. Lund, WW Mar./Apr. 90, p211-

Small Systems Struggle, John Prendergast, CE Jan. 92, p40-43.

Terminal Asphalt Patching: An Innovative Approach, C. Davis Rudolf, III. and George Degaraff, (Ports '92, David Torseth, ed., 1992), p836-848.

Urban Infrastructure: Our Crumbling POTW's, Walter A.

Orban Infrastricture: Our Crumbing Pol'w s, waiter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p685-689.

The U.S. Naval Facilities Offshore Platform Inspection, Maintenance, Repair and Rehabilitation Program, T. Regin and T. O'Boyle, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p531-545.

Maintenance Countries of Mood Transmission Lines, James M. Treat, Patrick J. Hasenoehrl and Andrew H. Stewart, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

True Costs, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1095-1100.

Management
ADR, TOM, Partnering, and Other Management Fantasies, F. H. "Bud" Griffis, El Oct. 92, p331-344.

Airport Landside Management: An Unique Airport Spe-cialty, Louis A. Turpen, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p212-222.

1992, p212-222.
Alternative Methods of Drainage Management in San Joaquin Valley, California, S. Alireza Taghavi and Ben Everett, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337.
The Changing Alliance Battagen Nativational and Envis.

The Changing Aliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412.

bilective Excellence: Building Effective Teams, Mel Hensy, 1992, 0-87262-841-8, 110pp.

Trensy, 1992, U-0-1202-841-8, 110pp. Communication Protocol in Structural Design Objects, Jamal A. Abdalla and Sanjai Tiwari, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p269-276.

ed., 1992), p269-276.
Comparison of Optimization Formulations for Waste-Load Allocations, Donald H. Burn and Barbara J. Lence, EE July/Aug. 92, p597-612.
Computer Support for Water Quality Management in San Diego Bay, A. E. Bale and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p176-181.
Conflict Management Training for Today's Engineering Managers, Vicki S. Kaman and James A. McCambridge, ME July 92, p298-305.
Construction Approach to Denver International Airport, Guy M. (Pat) Stricklin, (International Air Transportation: A New International Airport, Guy M. (Pat) Stricklin, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p184-19.

1992), p184-191.
Controlling CADD Quality, CC Sept. 92, p11,13.
Delaware Estuary Nonpoint Source Control Program, William Whipple, Jr. and Van Dyke Polhemus, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p718-723.
Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163.
Purplexipe as Industrial Toxics Management Program.

W. Eck, El Apr. 90, p150-163.
Developing an Industrial Toxics Management Program, Kathleen O. Gill and Tatiana Gianella, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p42-48.
Educational Needs of Civil Engineers in Management, Mark O. Federle, James E. Rowings, Jr. and Carlos Espana, ME Apr. 92, p192-207.

Emerging Issues in Transportation Facilities Management, Sue McNeil, Michael Markow, Lance Neumann, Jeffrey Ordway and Donald Uzarski, TE July/Aug. 92, p477-495.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and Panagiotis Mitropoulos, CO Sept. 92, p435-453.
FM—An Educated, Integrated Approach, Sine Hill, Cynthia Hallman and Richard Berner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p33-40.

Four Propositions for Quality Management of Design Or-ganizations, Donald H. Kline and Gregory B. Coleman, ME Jan. 92, p15-26.

Implementation of TOM in Building Design and Construction, Gerald W. Chase and Mark O. Federle, ME Oct. 92, p329-339.

Oct. 72, p3.69-339.

INFO: An Information Framework for Facility Operators, James P. Beckett and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p57-64.

Introduction to Ownership and Transition. I: Ownership Transfer Considerations, Robert E. Olden, ME Oct. 92,

Introduction to Ownership and Transition. II: Succession and Firm Valuation, Robert E. Olden, ME Oct. 92,

Irrigation Land Management Model, Roy A. Steiner and Andrew A. Keller, IR Nov./Dec. 92, p928-942. Irrigation Uniformity Relationships for Irrigation System Management, Albert J. Clemmens, IR Sept./Oct. 91, p682-699.

Issues in Hydropower Modeling Using GEMSLP Algo-rithm, K. K. Reznicek and S. P. Simonovic, WR Jan./ Feb. 92, p54-70.

Feb. 92, p54-70.

Management of Design, Richard L. Haury, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p170-183.

Management of Portland's Combined Sewer System, Claudia L. Zahorcak, Lester E. Lee and Gordon A. Nicholson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p468-473.

Management's Fatal Flaw: TOM Obstacle, William M. Hayden, Jr., ME Apr. 92, p122-129.

Managine Existing Reservoirs to Meet New Challenges.

mayden, Jr., Me. Apr. 92, p122-129.
Managing Existing Reservoirs to Meet New Challenges,
Morris Israel and Jay R. Lund, (Water Resources Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad
Karamouz, ed., 1992), p673-678.
Managing for Profit, Chester A. Shuman, CE Nov. 92,
p72-73.

Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, Kenneth P. Baskin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p691-694.

mittee, 1992), p091-094.
Modeling Bridge Deterioration with Markov Chains,
Mark A. Cesare, Carlos Santamarina, Carl Turkstra
and Erik H. Vanmarcke, TE Nov./Dec. 22, p820-833.
Modeling Construction Labor Productivity, H. Randolph
Thomas, William F. Maloney, R. Malcolm W. Horner,
Gary R. Smith, Vir K. Handa and Steve R. Sanders,
CO Dec. 90, p705-726.

CO Dec. 90, p703-726.
Nassau County Sludge Management Multi-Phased Environmental Assessment, Steve Fangmann, John Pascucci, Thomas Immerso, Carl Koch and Darlene McKinney, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274.
Overseas Perspectives for Managing Irrigation Drainage in California, Emery M. Roe, IR May/June 91, p350-360.

Performance Evaluations: Key to People Development, Everett S. Thompson, ME Oct. 90, p373-377. Planning Your Negotiation, Michael Lee Smith, ME July 92, p254-260.

Portrait of a Manager, Paul Tarricone, CE Aug. 92, p52-

Practitioners in Classroom: Viable Tool in Civil Engineering Education, James W. Poirot, ME Oct. 90, p388-393.

Professionalism: Cornerstone of Engineering, Perry L. Smith, El July 92, p258-260.

Quality Management Organizations and Techniqu James L. Burati, Jr., Michael F. Matthews and tyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Reliability-Centered Management of Wood Transmission Lines, James M. Treat, Patrick J. Hasenoehrl and An-drew H. Stewart, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992).

p91-95.

Reservoir Management and Thermal Power Generation,
Barbara J. Lence, M. Imran Latheef and Donald H.
Burn, WR July/Aug. 92, p388-405.

Small Stream Classification—A Process Based Approach,
Jeffrey B. Bradley and Peter J. Whiting, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p695-700.

Standard of Care for Delivery of Engineered Products,
James C. Porter, El Apr. 90, p193-201.

Substitutes for Leadership and Unionized Construction
Carpenters, Mark O. Federle and William F. Maloney,
CO June 92, p332-348.

Thoughts on Management of Acquisitions, Melville Hen-

Thoughts on Management of Acquisitions, Melville Hen-sey, ME Apr. 92, p130-137.

Trend in Local Area Network Utilization, Luh-Maan Chang and Li-Chung Chao, ME Jan. 92, p27-39. Trouble in Computer Paradise, Brian Brenner, CC Aug.

92, p12-13.

Unique Approach to Sludge Management, Suzanne L. Schweitzer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p262-268.

Using Computers to Competitive Advantage: Philosophy and Example, Philip C. Terry, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1105-1112.

Vertical Business Integration Strategies for Construction, Robert C. Krippaehne, Bob G. McCullouch and Jorge A. Vanegas, ME Apr. 92, p153-166.

A. Vanegas, ME Apr. 92, p133-106. Water Quality Management Planning—Bird River Watershed, Alan Cavacas, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101.

Management methods
ADR, TQM, Partnering, and Other Management Fantasies, F. H. "Bud" Griffis, El Oct. 92, p331-344.

Stes, F. H. Bod Offins, El Oct. 92, p331-344. Customer Requirements in Industrialized Housing, Robert L. Armacost, Paul J. Componation, Michael A. Mullens and William W. Swart, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p48-57

allas Light Rail Tunnel Breaks New Ground, CE July 92, p16,19.

Financial Incentive Programs for Average-Size Construc-tion Firm, Roger W. Liska and Bill Snell, CO Dec. 92,

Four Propositions for Quality Management of Design Or-ganizations, Donald H. Kline and Gregory B. Coleman, ME Jan. 92, p15-26.

Management of Agricultural Drainage Pollution Considering Regional Cooperation, T. C. Lyons and M. E. Grismer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p448-455.

Project Management Oversight—Good Tool for Program Managers, Michael G. Goode, ME July 92, p243-253. Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Sa-tyanarayana N. Kalidindi, CO Mar. 92, p112-128.

tyanarayana N. Kalidindi, CO Mar. 92, p112-128.
Staffing Up for a Major Program, Edward H. McCormick, David L. Pratt, Kurt B. Haunschild and Jean S. Hegdal, CE Jan. 92, p60-62.
TRB Report Predicts Little Future Airport Construction, CE Jan. 92, p21-22.
Using Conflict Management for Better Decision Making, Amagjit Singh and Demetres A. Vlatas, ME Jan. 91, 2002

Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

Management planning
Expert System for Agricultural and Water Quality Management, William L. Magette and Adel Shirmohammadi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p442-447.

Holistic Approach to Irrigation Management in Develop-ing Countries, Phillip Z. Kirpich, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p263-268.

Introduction to Ownership and Transition. II: Succession and Firm Valuation, Robert E. Olden, ME Oct. 92, p376-383.

Organizational Design: Some Helpful Notions, Melville Hensey, ME July 90, p262-269.

## Management style

ADR, TQM, Partnering, and Other Management Fanta-sies, F. H. "Bud" Griffis, El Oct. 92, p331-344.

### ent systems

Neely, Jr. and Robert Neathammer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p129-136.

Four Propositions for Quality Management of Design Organizations, Donald H. Kline and Gregory B. Coleman, ME Jan. 92, p15-26.

Management training
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Hayden, Jr., ME Apr. 92, p122-129.

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# Managers

Conflict Management Training for Today's Engineering Managers, Vicki S. Kaman and James A. McCam-bridge, ME July 92, p298-305.

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Organizational Design: Some Helpful Notions, Melville Hensey, ME July 90, p262-269.

Performance Evaluations: Key to People Development, Everett S. Thompson, ME Oct. 90, p373-377.

Portrait of a Manager, Paul Tarricone, CE Aug. 92, p52-

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Using Expert Systems to Manage Professional Survey Practices, T. K. Koo and Y. B. Aw, SU May 92, p43-62.

Franganese Effects of Pre-Oxidation on In-Line Filtration: Particle and Manganese Removal, John E. Tobiason and Nagaraju K. Vinod, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p520-525.

## Manholes

Drop Manholes in Supercritical Pipelines, George C. Christodoulou, IR Jan./Feb. 91, p37-47.

Head Losses in Storm Sewer Manholes: Submerged Jet Theory, Flemming Bo Pedersen and Ole Mark, HY Nov. 90, p1317-1328.

### Manifolds

Calculating Flow in Manifold and Orifice System, Fazal H. Chaudhry and Luisa F. R. Reis, EE July/Aug. 92, p585-596.

## Manpo

Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-

Effects of Freezing on Impact Properties of RTM Composites, and Their Applications in Offshore Structures, Gregory J. Pope and Vistasp M. Karbhari, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., neering in the (1992), p828-839.

Engineering Pre-engineered Buildings, Alexander New-man, CE Sept. 92, p58-61.

Realistic Specifications for Manufactured Sand, Charles R. Marek, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p245-260.

## Manufacturing facilities

Plant Produces Cements for Rugged Environments, CE Sept. 92, p14.

### Mapping

Assessing Lunar Resources with Remote Sensing, Sandra C. Feldman and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p586-596.

Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G. Balog, William P. Stack, Kenneth T. Belt and Nathan J. Beil, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503.

Developing a Functioning Visualization and Analysis System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p846-851.

Developing Infrastructure Lifecycle Solutions, Steven B. Glimpse and Jeffrey M. Young, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p818-824.

Evaluation of Failure Potential in Mudstone Slopes Using Fuzzy Sets, Der-Her Lee and C. Hsein Juang, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1922).

p1137-1151.

p0137-1131.
GeoLink: Integrating GIS and GPS for Land Use Planning, Road Mapping, and Environmental Analysis, Douglas Richardson and Thad Mauney, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p325-327.

Co., 1972), p35321.

Geological Mappability of Bored Versus Drill and Blast Excavations for Radioactive Waste Repositories, Bjorn Nilsen and Levent Oxdemir, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1499-1506.

GIS: New York's Pipe Dream, Harvey P. Moutal, David R. Bowen and Wendy Dorf, CE Feb. 92, p66-67.

GPS/Positioned Digital Video for Airborne GIS Data Acquisition, Brent Wanless, SU Aug. 92, p80-89. quastion, brent wantess, SU Aug. 92, p80-89. Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374.

Integrated GIS Solutions with Civil Engineering Projects, Jerry W. Williams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p328-331.

An Introduction to GIS, Lowell Kent Smith and Tracy Lenocker, CC Nov. 92, p1-6.

Irrigation and Drainage System As-Built Map Prepara-tion Using Satellite Digital Imagery and a GIS, Christo-pher M. U. Neale and Lymann S. Willardson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p311-316.

Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p582-589.

Mapping Slope Failure Potential Using Fuzzy Sets, C. I Juang, D. H. Lee and C. Sheu, GT Mar. 92, p475-494.

The Physiography and Engineering Constraints of the Continental Slope in the Northwestern Gulf of Mexico, William R. Bryant and Gregory R. Simmons, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1036-1050.

Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p19-24.

Review of Geostatistics in Geohydrology: I. Basic Concepts, ASCE Task Committee on Geostatistical Techniques in Geohydrology of the Ground Water Hydrology Committee of the ASCE Hydraulies Division, HY May 90, p612-632.

Site Mapping with 3DTM, Michael Lorczak, CC May 92,

Two Examples of Position Estimation, Gary Shaffer and Ben Motazed, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

Water's New World, Laura Lang, CE June 92, p48-50.

How to Implement GIS: Tools and Procedures, Robert Newton, CC Nov. 92, p9-11.

Military Secrets for Sale, CE May 92, p8.

Roadmaps: An Effective Issue-Based Planning Process, Cyril W. Draffin, Jr. and A. Nick Suttora, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1567-1571.

Alternative Study for the Breakwater and Fishing Pier Rehabilitation at Playland Park, Rye, New York, David W. Yang, Michael J. McCarthy, Edward J. Schmeltz, Joseph Bonasia and Ralph Butler, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p632-645.

Application of Traffic Engineering Concepts to Pleasure Boat Traffic, Russell H. Boudreau, Michael C. Leue and James R. Walker, (Ports '92, David Torseth, ed.,

1992), p248-262.

Case Study—Elliott Bay Marina Floating Moorage, Craig S. Funston, (Ports '92, David Torseth, ed., 1992). p263-274.

Comparison of Model and Field Results for Barbers Point Harbor, Michael J. Briggs, Linda S. Lillycrop and David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p387-399.

Sieven A. Hugnes, ed., 1992), p.387-399.
Design, Construction, and Performance of a Baffled Breakwater, Jonathan W. Lott and Walter E. Hurtienne, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), 4847-502.
Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (Ports '92, David Torseth, ed., 1992), p.275-287.

Inner Harbor Wave Conditions due to Breakwater Over-topping, Fredric Raichlen, Jack C. Cox and Jerald D. Ramsden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p425-446.

Proposed EPA Regulations Worry Marina Industry, CE Feb. 92, p27.

Response of Shoaling Frequency, Russell H. Boudreau, Alan Alcorn and Stephen Fine, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p447-461.

Spin-fin Piles Gain in Application, CE Jan. 92, p12-13.

# Marine animals

Investigation of Zebra Mussel Adhesion Strength Using a Rotating Disk, Josef Daniel Ackerman, C. Ross Ethier, D. Grant Allen and Jan K. Spelt, EE Sept./Oct. 92, p708-724.

## Marine borers

an Waters Taking a Toll on Timber Structures, CE Mar. 92, p28-29.

Moduli and Damping Factors of Soft Marine Clays, Takaaki Kagawa, GT Sept. 92, pl 360-1375. Performance of Precast Driven Piles in Marine Clay, Chun F. Leung, R. Radhakrishnan and Siew-Ann Tan, GT Apr. 91, p637-657.

Performance of Test Embankment Constructed to Failure on Soft Marine Clay, B. Indraratna, A. S. Balasu-bramaniam and S. Balachandran, GT Jan. 92, p12-33.

Marine engineering
Composites for Offshore Applications: A Multidisciplinary Education Program for the Marine Industry, Diane
S. Kukich, Vistasp M. Karbhari and John W. Gillespie,
Jr., (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p953-967.

## Marine plants

Velocity Distribution Inside and Above Branched Flexi-ble Roughness, Omnia El-Hakim and Mohamed M. Sa-lama, IR Nov./Dec. 92, p914-927.

### Marine terminals

Analysis of a Wharf for a Container Terminal, Luis Her-nández Toca and José A. Arréllaga, (*Ports* '92, David Torseth, ed., 1992), p228-237.

Bulk Commodity Terminals—Planning for the Future Competitive and Environmental Challenges, Gordon W. Zonailo, (Ports '92, David Torseth, ed., 1992), p695-708.

poys-708.

A Comprehensive Approach to Container Terminal Planning: Striking a Balance, William D. Friedman, (Ports '92, David Torseth, ed., 1992), p29-42.

Container Terminal Gates Flexible Design for a Dynamic Environment, Larry Nye, (Ports '92, David Torseth, ed., 1992), p912-925.

Container Terminal Planning: 2001, James E. Davis, (Ports '92, David Torseth, ed., 1992), p15-28.

Crane Raise with Zero Downtime, William L. Casper and Alex Surko, (Ports '92, David Torseth, ed., 1992), p749-756.

Earthquake Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Ger-ald M. Serventi and Larry L. Scheibel, (*Ports '92*, David Torseth, ed., 1992), p429-442.

Gate Maritime Wharf and Intermodal Facility Viswanath K. Kumar, William L. Allen and Thomas A Mantia, (Ports '92, David Torseth, ed., 1992), p43-57.

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p38-71.

On-Off Terminal Ship-to-Rail Transfer, Asaf Ashar, (Ports '92, David Torseth, ed., 1992), p108-120.

Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.

Planning/Analysis of VPA's Norfolk North Terminal, Thomas Ward, Richard A. Woodman and Bernardo de Castilho, (Ports '92, David Torseth, ed., 1992), pl 34-142.

Ports '92, 2 vols., David Torseth, ed., 1992, 0-87262-874-4, 1212pp.

Pre-Compression of Concrete Breasting Dolphins Solves Construction Problem, Robert A. Blowers, Alexander Matlin and Antoni J. Zelechowski, (Ports '92, David Torseth, ed., 1992), p602-615.

Replacement of a Deteriorated Steel Sheet Pile Bulkhead, Vincent G. Miller and Vladimir Ostrov, (Ports '92, David Torseth, ed., 1992), p826-835.

Riprap Design in Marine Terminals, Sandra K. Martin and Stephen T. Maynord, (Ports '92, David Torseth, ed., 1992), p364-375.

Seismic Repair at Seventh Street Marine Terminal, John A. Egan, Robert F. Hayden, Larry L. Scheibel, Mahmut Otus and Gerald M. Serventi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p867-878.

Seismic Survey Considerations in the Planning and Design of Dredging Projects for Marine Terminal Facilities, Charles J. Natale, Jr., Thaddeus A. Nowak, Jr. and Bruce A. Adams, (Ports '92, David Torseth, ed., 1992).

Soil Contamination Issues at Port Marine Terminals, Donald W. Rice, (*Ports '92*, David Torseth, ed., 1992), p288-300.

Technology—Key to Environmental Success, Paul Soros, (Ports 92, David Torseth, ed., 1992), p189-202. Underground Refrigeration Outlets, Clay Waseen, (Ports '92, David Torseth, ed., 1992), p682-694.

Upgrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alex-ander Surko, Jr., (Ports '92, David Torseth, ed., 1992), p802-814.

Vacuum Alumina Unloader for Port of Everett, Curtis O. Hecla, (Ports '92, David Torseth, ed., 1992), p143-149. Waste Water Management at Bulk Terminals, Peter White, (Ports '92, David Torseth, ed., 1992), p178-188.

Professionalism and Marketing of Civil Engineering Pro-fession, John A. Alexander, El Jan. 91, p10-20.

Markov Chain Approach for Analyzing Palmer Drought Index, Marcel K. Tchaou, Saied Mostaghimi and G. V. Loganathan, (Irrigation and Drainage: Sav-ing a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p341-346.

Modeling Bridge Deterioration with Markov Chains, Mark A. Cesare, Carlos Santamarina, Carl Turkstra and Erik H. Vanmarcke, TE Nov./Dec. 92, p820-833.

Markov process
Discrete Markov Process Approach to Fatigue Crack
Growth, T. J. Enneking and B. F. Spencer, Jr., (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p792-795.

Niedzwecki, ed., 1992), p792-193.
Markov Decision Processes in Structural Optimization,
Zongwei Tao, J. Hugh Ellis and Ross B. Corotis, (Probabilistic Mechanics and Structural and Geotenhical
Reliability, Y. K. Lin, ed., 1992), p539-542.
Parametric and External Excitation of Marine Risers, S.
K. Thampi and J. M. Niedzwecki, EM May 92, p942-

Probability Model of Load Exceedances under Cyclic Loadings, Karen C. Chou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p208-211.

Wavefront Propagation in Random Granular Media, Martin Ostoja-Starzewski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p384-387.

Marshes
Evolving Mitigation Requirements for Port Development, William K. Fehring, Mark Easley and David C. Carpenter, (Ports '92, David Torseth, ed., 1992), p203-213.

Play Ball: Oriole Park at Camden Yards Set to Open, CE Apr. 92, p15.

Behavior of Concrete Hollow-Block Masonry Prisms under Axial Compression, T. P. Ganesan and K. Ramamurthy, ST July 92, p1751-1769.
Computed Versus Observed Seismic Response and Damage of Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1804-1821.
Computer-Controlled Brick Masonry, Leonhard E. Bernold, Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-167.

p147-160.

nold, Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-160.

Earthquakes: A New Look at Cracked Masonry, Randolph Langenbach, CE Nov. 92, p56-58.

Effectiveness of Seismic Strengthening Techniques for Masonry Buildings, Fillista V. Karantoni and Michael N. Fardis, ST July 92, p1884-1902.

Failure Analysis of Masonry Structures, P. B. Shing, H. R. Lotfi, A. Barzegarmehrabi and J. Brunner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p780-783.

Fuzzy Measures in the Knowledge Based Diagnosis of Seismic Vulnerability of Masonry Buildings, Alberto Bernardini, Roberto Gori and Claudio Modena, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28.

Implementing Uncertainty Treatment in Al Development Environment, Fabio Casciati and Debbie Liu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p17-20.

Masonry as a Structural Material, Daniel P. Abrams, (Materials: Performance and Prevention of Deficiencies and Faithres, Thomas D. White, ed., 1992), p16-129.

Masonry Wall and Window System Leakage Investigation for University Building, John Frauenhoffer, CF May 92, p107-115.

for University Building, John Frauenhoffer, CF May 92, p107-115.
Out-of-Plane Seismic Response of Reinforced Masonry Walls, Martin R. Button and Ronald L. Mayes, ST Sept. 92, p2499-5213.
Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p37-90.
Stability of Masonry Piers and Arches, Thomas E. Boothby and Colin B. Brown, EM Feb. 92, p367-383.
Tomorrow's Schools, Socrates Ioannides and Robert P. Beall, CE Jan. 92, p36-58.

Ristoiu, Gavrila Toderean, tosif Chereji, Daniel Olimpiu Ursu and Vadim Glebovici Istomin, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2264-2270.

1992), p2.264-2210.
Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, Mark P. Nathan, Franch Barnes, Hon-Yim Ko and Stein Sture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-457.

Système International Yes, Newton No, Douglas W. Barr, CE Sept. 92, p6.

CE Sept. 34, po.

Mass transfer

Estimating VOC Emission Rates in Aeration Systems,
Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—
In Search of Solutions, F. Pierce Linaweaver, ed.
1992), 973-78.

NCASI Experiments Related to Validation of SedimentWater Column Exchange Models for Hydrophobic
Chemicals, Steven W. Hinton and Ray C. Whittemore,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p387-389.

Mass transport
Application of a Boundary Fitted Coordinate Mass
Transport Model, Daniel L. Mendelsohn and J. Craig
Swanson, (Estuarine and Coastal Modeling, Malcolm
L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg,
ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),
p382-404.

p382-404. Assessing Cu(II) Speciation and Transport in the New York Bight, A. B. M. Badruzzaman and Wu-Seng Lung, (Estusarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p476-488. The Hopsoctoch Algorithm for Three-Dimensional Simulation, Geneviève Ségol, HY Mar. 92, p385-406. Hydrodynamics for Water Quality Models, Mark Dortch and Billy Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p145-150.

130. Model Sensitivity Analysis in Near-Field Performance Assessment, N. C. Garisto and D. M. LeNeveu, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2284-2289.
Non-Paint Source Pollution Date to Rusoff Over Sandy

1992), p2284-2289.

Non-Point Source Pollution Due to Runoff Over Sandy Soil, D. Payne, C. Richardson, A. D. Parr and K. Janish, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p439-444.

Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p778-783.

Massachasetts
Crane Raise with Zero Downtime, William L. Casper and
Alex Surko, (Ports '92, David Torseth, ed., 1992),
p749-756.
CSO Abatement for Gloucester Harbor in Massachusetts,
Jon R. Pearson, Donald J. Chelton and Michael P. Collins, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p1240-1241.
Major Public Transportation Investments as "Development Projects": Old Colony Railroad, Mary P.
McShane, (Site Impact Traffic Assessment: Problems
and Solutions, Robert E. Paaswell, ed., Nagui
Rouphail, ed. and T. C. Sutaria, ed., 1992), p138-142.
Regional Flow-Duration Curves for Ungauged Sites in
Massachusetts, Neil Fennessey and Richard M. Vogel,
WR July/Aug, 90, p530-549.

WR July/Aug. 90, p530-549.

Master plans
The Application of UNET to a Complex Channel Network, Marc C. Johnson, (Hydraulic Engineering: Suring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p148-1153.

Case Study: Design of a Traditional Village Master Plan, Raul J. Cotilla, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p111-120.

Coupled Water-Wastewater Management Issues, Kip Duchon and Robert Troxler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p529-531.

GIS, Remote Sensing, and Master Water Plan: A Case Study, Uzair M. Shamsi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p695-702.

New Hong Kong International Airport, Tom Darmody and Peter Wright, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p272-280.

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.

FRP-Reinforced Wood as Structural Material, Nikolaos Plevris and Thanasis C. Triantafillou, MT Aug. 92, p300-317.

chanical Characterization of the Soft Tis sue in Hor Mechanical Characterization of the Soft Tissue in Hord, Harry A. Hogan and David M. Hood, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p147-150. OCEA, American-Style, Paul Tarricone, CE July 92, p57-60.

p57-60.

Pseudoforce Method of Solution for Highly Nonlinear Systems, Satish Nagarajaiah and Andrei Reinhorn, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p913-920.

Ropeway Material Handling Systems for Lunar Mining Sites, H. Peter Huttelmaser and Jonathan R. Carrick, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1116-1126.

Support Structures for High-Resolution Optical Systems.

Support Structures for High-Resolution Optical Systems, Ralph M. Richard and Daniel Vukobratovich, AS Jan. 92, p24-43.

Materials engineering
Chemical Analysis in Space Exploration: A Lunar-based
Chemical Analysis Laboratory (LBCAL), Mitchell K.
Hobish, Charles W. Gehrke, Cyril Ponnamperuma and
Robert W. Zumwalt, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p565-575.

Sture, ed. and Russell J. Miller, ed., 1992), p565-575. Implementation of Material Requirements in Specifications, Harvey C. Beckham and John R. Smith, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p428-433. Materials and Structures Synergistic with In-Space Materials Utilization, Kumar Ramohalli, Farhang Shadman.

Islam Visitzation, Rumar Ramohalli, Farhang Shadman and K. R. Sridhar, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p714-725.Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992, 0-87262-880-9, 776pp.

Materials failure
Airfield Pavement Creep Failure Investigation, John C.
Potter, CF Aug. 92, p177-184.
Geometric and Material Nonlinear Analysis of Thin-Walled Beam-Columns, J. L. Meek and W. J. Lin, ST June 90, p1473-1490.

Hygrothermal Effects on Mechanical Properties of Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Feb. 92, p567-581.

Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992, 0-87262-880-9, 776pp.

Materials, properties

Analysis of Corroded Reinforced Concrete Sections for Repair, Ying-Su Yuan and Marton Marosszeky, ST July 91, p2018-2034.

July 91, p2018-2034.

Behavior of Compacted Lunar Simulants Using New Vacuum Triaxial Device, Chandra S. Desai, Hamid Saadatmanesh and Thomas Allen, AS Oct. 92, p425-

441.
Consistency and Fairness in Geotextile Specifications, C. Joel Sprague and Marshall Gaddy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p288-298.
Determination of Geotechnical Properties of Uranium Tailings, Antonio Santos, José M. Martinez and Juan Luis Santiago, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p175-191.
Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp.
Factors Controlling Properties and Durability of Concretors and Popular Properties and Durability of Concretors.

Factors Controlling Properties and Durability of Co tionary Laterite Gravel Aggregates, Enuvie G. pokodje and Peter P. Hudec, MT Feb. 92, p58-70.

ber: Good For the Concrete Diet? William C. Panarese, CE May 92, p44-47.

Knowledge-Based Modeling of Material Behavior with Neural Networks, J. Ghaboussi, J. H. Garrett, Jr. and X. Wu, EM Jan. 91, p132-153.
Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992, 0-87262-980. 9.726.

Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992, 0-87262-880-9, 776pp.
 On a Micromechanical Basis of Stochastic Constitutive Laws, Martin Ostojs-Starzewski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p184-187.
 Properties of PVB Interlayer Used in Laminated Glass, C. V. Girija Vallabhan, Y. C. Das and Manjunatha Ramasamudra, MT Feb. 92, p71-76.
 RCC Mixes and Properties Using Poor Quality Materials—Concepcion Dam, L. Gaekel and E. Schrader, (Rolier Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p338-373.
 Retrospect and Prospect: Micromechanics, Sia Nematnasser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p632.
 Structural Fire Protection (M&R No. 78), ASCE Committee on Fire Protection, Structural Division, American Society of Civil Engineers, E. L. Schaffer, chmn.), 1992, 0-87262-888-4, 200pp.
 Variations in Measured Resilient Modulus of Asphalt Mixes, Faisal H. Al-Sugair and Jamal A. Almudaiheem, MT Nov. 92, p343-352.
 Wavefront Propagation in Random Granular Media, Martin, Octoba Starzewski (Popobalitiet, Mechanics, Media, Martin, Octoba Starzewski (Popobalitiet, Mechanics, Media, Martin, Octoba Starzewski (Popobalitiet, Mechanics, Media, Med

Wavefront Propagation in Random Granular Media, Martin Ostoja-Starzewski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p384-387.

ed., 1992), p384-387.

Materials testing
Alternative Airfield Pavement Quality Control, Raymond
P. Rawe and Terry A. Ruhl, (International Air Transportation: A New International Airport, Robert E.
Boyer, ed., 1992), p109-123.
A European Road Comes to the U.S. John Prendergast,
CE May 92, p35-34.
Fiber: Good For the Concrete Diet? William C. Panarese,
CE May 92, p44-47.
Indigenous Planetary Construction Material Through Soil
Modification, Leonhard E. Bernold, Yasuyuki Horie
and Mark B. Boslough, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p493-503.
The Initiation of Bifurcations and Localization in Damaging Materials, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p365-368.
Limiting Design Parameters for Accelerated Pavement-

gineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p365-36c8lerated Pavement-Testing System, T. D. White, J. M. Albers and J. E. Haddock, Sr., TE Nov./Dec., 92, p787-804. Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992, 0-87262-880-9, 776pp.
Materials: Testing Aspects of the Problem of the Chernobyl NPP 4th Unit's High-Level Radioactive Products Burial, E. B. Anderson, B. E. Burakov and E. M. Pasukhin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2395-2398. Modeling of Localized Electrochemistry Within Occluded Regions, Maureen J. Pasila-Dombrowski, Alan Turnbull and Ronald Ballinger, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1687-1694. Particle Analysis of Material Behavior—A Note on Continuum Assumptions, John R. Williams, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p179-183.

NIGERWECKI, ed., 1992), p.179-183.
Power Sources for Lunar Bases, Alastair J. W. Mayer,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p.76-3-773.
Properties of Aramid-Fiber Reinforced Concrete and SIFCON, Antonio Nanni, MT Feb. 92, p.1-15.
Put to the Test, Paul Tourney and Neal Berke, CE Dec.

Put to the Test, Paul Tourney and Neal Berke, CE Dec. 92, p62-63.
RCC Mixes and Properties Using Poor Quality Materials-Concepcion Dam, L. Gaekel and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p358-373.
Risk Based Optimal Fatigue Testing, J. D. Sørensen, M. H. Faber and I. B. Kroon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p523-526.

Roller Compacted Concrete Mix Design, Stephen Tatro and James K. Hinds, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p323-340.

Safety and Service Life of Equipment Designed for Cold Climate Operation, V. P. Larionov, CR Sept. 92,

p111-123.

wo-Dimensional Statistical Micromechanical Models for Microcracked Brittle Solids, K. H. Tseng and J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p361-364.

Materials tests
Aerogel—A Transparent, Porous Superinsulator, Arlon J.
Hunt, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992),
Consideration of Consideration of

p398-403.
Consistency and Fairness in Geotextile Specifications, C. Joel Sprague and Marshall Gaddy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p288-298.
The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79.
Direct Tensile Test: Stability and Bifurcation, Zdenek P. Bažant and Luigi Cedolin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p357-360.
Estimation of Suberade Resilient Modulus from Standard

Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, GT May 90, p774-789.

Pierce, GT May 90, p774-789.

Evaluation of Fine Augregate Particle Shape and Texture, E. R. Brown, P. S. Kandhal and James W. Winford, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p216-230.

Improved Resilient Modulus Realized with Waste Product Mixtures, Seung W. Lee and K. L. Fishman, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1356-1367.

Materials and Structures Synergistic with In-Seaso Materials and Structures Synergistic with In-Seaso Materials

1992), pl 356-1367.
Materials and Structures Synergistic with In-Space Materials Utilization, Kumar Ramohalli, Farhang Shadman and K. R. Sridhar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p714-725.
Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange", John Zachar and Tarun R. Naik, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p107-115 p107-115

andom Initial Heterogeneity and Degradation in Brittle Materials, X. Yuan, F. F. Tang and G. Frantziskonis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p616-619.

Rate Effects in Uniaxial Dynamic Compression of Con-crete, Tianxi Tang, Lawrence E. Malvern and David A. Jenkins, EM Jan. 92, p108-124.

Mathematical models
1-D Open-Channel Flow Simulation Using TYDMcCormack Scheme, P. García-Navarro, F. Alcrudo
and J. M. Savirón, HY Oct. 92, p1359-1372.

Analytical Aerodynamic Investigation of Cable-Stayed Helgeland Bridge, Imre Kovacs, Holger S. Svensson and Elljarn Jordet, ST Jan. 92, p147-168.

Bolted Connections in Wood under Bending/Tension Loading, R. Davalos-Sotelo and P. J. Pellicane, ST Apr. 92, p999-1013.

Coarse-Grain Parallel Computing Using ISIS Tool Kit, Ralph Finch and Shao-Kong Kao, CP Apr. 92, p233-

Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Fach and Géraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 112-1117. Conceptual Bed-Load Transport Model and Verification for Sediment Mixtures, Shaohua Marko Hsu and Forrest M. Holly, Jr., HY Aug. 92, pl 135-1152. Diversion Oil Booms in Current, M. Robinson Swift, Barbaros Celikkol, Gilles LeCompagnon and Chris E. Goodwin, WW Nov./Dec. 92, p587-598. Dynamic Modeling of VOC Emissions in HPO Process, Chwen-Jeng Tzeng, Roger W. Babcock, Jr., Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p67-72.

Effects of Viscosity on Migration of Spills of Hazardous Liquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened Resource In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p784-789. Estimating Earthwork Volumes of Curved Roadways: Mathematical Model, Said M. Easa, TE Nov/Dec. 92,

p834-849.

p834-849.
Evaluation of Advanced Construction Technology with AHP Method, Miroslaw J. Skibniewski and Li-Chung Chao, CO Sept. 92, p577-593.
Financial Performance Analysis for Construction Industry, Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, CO June 92, p349-361.
Global Climate Change Effects on Water Quality, G. K. Meyer and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p19-24. p19-24.

p19-24.
The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, Boris Galperin, Alan F. Blumberg and Robert H. Weisberg, (Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, p332-343.
Incorporating Hydraulic Structures in an Open-Channel Model, Enc. D. Swain, (Hydraulic Engineering: Soning a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1118-1123.

p1118-1123

p118-1123.

An Integrated Expert System for Operating a Petroleum Refinery Activated Sludge Process, Weibo Yuan, Michael K. Stenstrom, Naci H. Ozgur and David Ökren (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p480-485.

Mathematical Model for Piping, M. A. Koenders and J. B. Sellmeijer, GT June 92, p943-946.

Mathematical Zero-Inertia Modeling of Surface Irrigation: Advance in Furrows, Gerd H. Schmitz and Günther J. Seus, IR Jan./Feb. 92, p1-18.

Mechanics of Growing Deformable Solids: A Review, V. E. Naumov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p510-513.

Migration of Chloroform in Aquifers, Sergio E. Serrano,

ed. and John M. Niedzwecki, ed., 1992), p510-513.

Migration of Chloroform in Aquifers, Sergio E. Serrano,
EE Mar/Apr. 92, p167-182.

Modeling and Simulating Learning Development in Construction, Adib M. Hijazi, Simaan M. AbouRizk and
Daniel W. Halpin, CO Dec. 92, p685-700.

Modeling Channel Bed Transients Using Explicit F-D
Schemes, B. Morse and R. D. Townsend, HY Nov. 90,
p1345-1356.

odeling Load-Slip Behavior of Nailed Joints, Ruy A. Sà Ribeiro and Patrick J. Pellicane, MT Nov. 92, p385-398. Modeling Low-Flow Mixing through Pools and Riffles, Il Won Seo and W. Hall C. Maxwell, HY Oct. 92, p1406-

Modeling of Soil Venting Processes to Remediate Unsaturated Soils, Suresh Lingineni and Vijay K. Dhir, EE Jan./Feb. 92, p135-152.

Jan./Feb. 92, p135-152.

Modeling Transport and Fate of Micropollutants in Coastal Waters, Tjitte Nauta, Hans van Pagee and Mindert de Vries, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p304-316.

Modeling Vertical Structure of Open-Channel Flows, Alan F. Blumberg, Boris Galperin and Donald J. O'Connor, HY Aug. 92, p1119-1134.

Motion Response and Wave Attenuation of Linked Floating Breakwaters, Iraklis A. Valioulis, WW Sept./Oct. 90, p558-574.

90, p558-574.

Operational Strategies for Predenitrification Process, R. Jain, G. Lyberatos, S. A. Svoronos and B. Koopman, EE Jan. Feb. 92, p56-67.

Optimal Long-Term Scheduling of Bridge Deck Replacement and Rebabilitation, Timothy L. Jacobs, TE Mar./Apr. 92, p312-32.

Optimal Scheduling of Consecutive Landfill Operations with Recycling, Timothy L. Jacobs and Jess W. Everett, EE May/June 92, p420-429.

Optimization Model for Operation of Recharge Basins, Hasan Mushtaq, Larry W. Mays and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p305-309.

Optimization Models for Groundwater Development, Robert Willis and Miquel Mariño, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1244.

Bnowmik, ed., 1992), p1244.
Optimum Channel Contraction for Supercritical Flows, P. Rutschmann, O. F. Jiménez and M. H. Chaudhry, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jeanings, ed. and Nani G. Bhowmik, ed., 1992), p754-759.
Optimum Design of Composite Hybrid Plate Girders, Balaur S. Dhillon and Chen-Hsing Kuo, ST July 91, p2088-2098.

p. 2088-2098. Passive Dispersive Transport Modelling: Comparison with Experimental Rhodamine Data in the Elbe Estuary, Germany, Joachim Krohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p. 127-139. pH Control in Anaerobic Treatment of Industrial Wastewater, G. K. Anderson and G. Yang, EE July/Aug. 92, p. 551-567.

Rationalizing Water Requirements with Aid of Fuzzy Allocation Model, Janusz Kindler, WR May/June 92, p308-323.

pservoir Systems Analysis: Closing Gap Between Theory and Practice, Slobodan P. Simonovic, WR May/June 92, p262-280.

92, p.262-280.
A Review of Mathematical Models for Fine Sediment Transport Processes, Y. Peter Sheng, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.381-385.
Shape Optimization of Arch Dams for Static and Dynamic Loads, Bofang Zhu, Bin Rao, Jinsheng Jia and Yisheng Li, ST Nov. 92, p.2996-3015.
Sludge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar./ Apr. 92, p.196-208.
Some Modeling and Analysis Techniques for Wave Proposition.

Apr. 92, p196-208.

Some Modeling and Analysis Techniques for Wave Propagation in Random Media, Georges A. Bécus, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p377-380.

de St. Venant Modelling in the Irrigation Environment, Ehab A. Meselhe and Forrest M. Holly, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1124-1129.

Stability Theory of Cobesive Crack Model, Yuan N. Li

Bhowmik, ed., 1992), p1124-1129.

Stability Theory of Cohesive Crack Model, Yuan N. Li and Robert Y. Liang, Em Mar. 92, p587-603.

Structural Fire Protection (M&R No. 78), ASCE Committee on Fire Protection, Structural Division, American Society of Civil Engineers, (E. L. Schaffer, chmn.), 1992, 0-87262-888-4, 260pp.

Theory of Chaos and Radionuclide Distribution, E. A. Yfantis, G. Miel and G. M. Gallitano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2339-2343. Waste Management p2339-2343.

p2339-2343.
Transients in Canal Network, Rajeev Misra, K. Sridharan and M. S. Mohan Kumar, IR Sept/Oct. 92, p690-707.
Use of Density Current to Modify Thermal Structure of TVA Reservoirs, Vahid Alavian and Pete Ostrowski, Jr., HY May 92, p688-706.
Velocity Gradient in Filter Backwashing, Mustafa Turan, EE Sept/Oct. 92, p776-790.
Water-Quality Modeling for Decision Making, G. T. Orlob, WR May/June 92, p295-307.

Mathematical programming Reliability of Portal Frames With Interacting Stress Re-sultants, Luis Miguel da Cruz Simões, ST Dec. 90, p3475-3496.

Use of Mathematical Programming Methods for Complex Systems, James G. Uber, E. Downey Brill, Jr. and John T. Pfeffer, WR May/June 92, p281-294.

Mathematics

Conversion Between Quadratic and Power Law for Non-Darcy Flow, G. H. George and D. Hansen, HY May 92, p792-797.

Drawdowns for Constant-Discharge One-Dimensional Leaky Aquifer, Louis H. Motz, IR May/June 90, p456-

Drawdowns for Nonleaky Aquifer Flow with Storage in Finite-Width Sink, Louis H. Motz, IR July/Aug. 92,

Elastic Solutions for Arbitrarily Shaped Foundations, K. S. Li, GT June 92, p938-942.

EQSWP: Extended Unsteady-Flow Double-Sweep Equation Solver, Theodor Strelkoff, HY May 92, p735-742.

Form Comparison Without Anatomical Landmarks, Gautam Dasgupta, Mona E. McAlarney, Colin Goodall, Letty Moss-Salentin and Melvin L. Moss, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975.

Horton Infiltration Equation Revisited, A. Osman Akan, IR Sept./Oct. 92, p828-830.

Interpretation of Kostiakov Infiltration Parameters for Borders, D. M. Hartley, IR Jan./Feb. 92, p156-165.

Knowledge Representation With Logic, Deepak Jain, Kincho H. Law and Helmut Krawinkler, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p15-42.

Mathematical Tool Set for SORM Reliability Methods, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p248-251.

p248-251.

p248-251.

Maximum and Minimum Storage Trajectories That Meet Specific Risk Levels, Laura Fagherazzi, Jean-Claude Rassam and André Turgeon, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p284-303.

Protected-Paste Volume of Air-Entrained Cement Paste. Part 1, K. Natesaiyer, K. C. Hover and K. A. Snyder, MT May 92, p166-184.

Matrices, mathematics EQSWP: Extended Unsteady-Flow Double-Sweep Equa-tion Solver, Theodor Strelkoff, HY May 92, p735-742.

Matrix analysis
Interaction Between Soil and a Rigid Foundation in a
Layered Medium: A New Analytical Approach, R. C.
Zhang, Y. Yong and J. Yu, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p584-587.

Mats
Articulating Block Mat Revetment for Whaler's Village,
Robert A. Nathan and David G. Cannon, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),
p268-284.

p.205-284.

Dams Going Safely over the Top, R. Lee Wooten, George R. Powledge and Stephen L. Whiteside, CE Jan. 92, p.52-54.

Monumental Task, Victor Omelchenko, Thad Bergling, David J. Oleynik and Satish B. Shah, CE June 92, p60-

Maximum probable flood
Sensitivity of HMR-51/52/PMP-Based Probable Maximum Flood (PMF) to Basin Lag and Land Use, Oner
Yucel, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p895-899.

McCarty, James E. James McCarty Begins Term as ASCE's 124th President, CE Nov. 92, p74-75.

CE Nov. 92, p74-75.

Measurement
Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1094-1099.
Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561.
Electronic Theodolites: Comparison Test, Abdalla Elsadig Ali, SU Feb. 91, p3-8.
Evaluation of Soil Water Sensors in Frozen Soils, John L. Nieber, John M. Baker and Egbert J. A. Spaans, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p168-181.

Vincent C. Janoo, ed. and Robert A. Eaton, ed., 17726, p168-181. Flow Visualization of Lid-Driven Cylindrical Cavity Flow, You-Gon Kim and Ching-Jen Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p393-396. Importance of the Tropical Rainfall Measuring Mission CTPMAM. Scallits of Endinguigal Investigations.

(TRMM) Satellite to Hydrological Investigations, Joanne Simpson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p523-528.

In-situ Stress and Strain Measurements in Dynamically Loaded Asphalt Pavement Structures, C. H. Vogelzang and S. R. Bouman, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p244-260.

Live Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nassif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

Load and Temperature Measurements for a Study of Rut-ting Under High-Pressure Tires, William C. Dass, Su-san M. Dass and James G. Murfee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212.

Measurement and Prediction of Surface Shear Stress in Annular Flume, D. I. Graham, P. W. James, T. E. R. Jones, J. M. Davies and E. A. Delo, HY Sept. 92, p1270-1286.

Measurement of Deformations in Buried Pipeline, W. F. Teskey, D. A. Bayly and I. R. Colquhoun, SU Feb. 92, p1-10.

Measurement of Shock Pressure from FWD on a Con-crete Pavement by Impedance-Matched Shock Gauge, Piyush K. Dutta and John Kalafut, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228.

Measuring Ozone by Indigo Method: Interference of Suspended Material, Mary E. Williams and Jeannie L. Darby, EE Nov./Dec. 92, p988-993.

Model Uncertainty Representation in Geotechnical Reli-ability Analyses, Knut O. Ronold and Peter Bjerager, GT Mar. 92, p363-376.

Man. 32, p303-376.

Monitoring of Highway Pavements in Arizona Using Falling Weight Deflectometer, A. S. M. Mustaque Hossain and Larry A. Sociledl, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p276-290.

No More Newtons (ltr), J. F. Polma, CE Nov. 92, p36.

Radiation Measurements for Verifying the Loading of Burnup Credit Casks, Ronald I. Ewing, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2161-2164.

Roughness Measurements of Airfield Pavements, Elson B. Spangler, Anthony G. Gerardi and Hisao Tomita, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366.

Status of Scour Instrumentation Development, Roy Trent and Ian Friedland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1088-1093.

Strain and Stress Measurements in Pavements, Matti Huhtala and Jari Pihlajamäki, (Road and Airport Pave-ment Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p229-243.

Study of Groins on the Middle Rio Grande, Drew C. Baird and Cassie C. Klumpp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p822-827.

Synchrotron Radiation Measurements of Degree of Saturation in Porous Matrix, Scott A. Wells and Richard I. Dick, EM Aug. 92, p1738-1744.

Dick, EM Aug. 22, p1/36-1/49.

A System for Measuring Moisture Transients in ClayBased Barrier Materials, A. W. L. Wan, B. H. Kjartanson, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau,
[High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1122-1128.

Système International Yes, Newton No, Douglas W. Barr, CE Sept. 92, p6.

Updating Dynamic Models and Their Associated Uncertainties for Structural Systems, J. L. Beck and L. S. Katafygiotis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p681-684.

The World's Smallest Road, CE Nov. 92, p10.

New voite Similars Roda, C. E. Wo. 7-2, pt. 0.

X. Ray and Visible Light Transmission as Two-Dimensional, Full-Field Moisture-Sensing Techniques A Preliminary Comparison, V. C. Tidwell and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1099-1110.

Brief Literature Review of Open-Channel Current Meter Testing, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p458-463. road-Crested Weir Application on 15,000-Acre Farm, S. W. Styles, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p300-304. Pursecteristics of U.S. Geological Survey Discharge.

ed., 1992), p300-304.

Characteristics of U.S. Geological Survey Discharge Measurements for Water Year 1990, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p452-457.

Consistency and Reproducibility of Falling Weight Deflections, Christ van Gurp, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p291-305.

Design Live Loads for Coherent Crowd Harmonic Movements, A. Ebrahimpour and R. I. Sack, ST Apr. 92, p1121-1136.

Electronic Theodolites: Comparison Test Abdalls Electronic Theodolites: Comparison Test Abdalls Electronic Theodolites: Comparison Test Abdalls Electronic Test Abd

pl121-1136.
Electronic Theodolites: Comparison Test, Abdalla Elsadig Ali, SU Feb. 91, p3-8.
Field Evaluation of Strain Gauges in Asphalt Concrete Pavements, Peter E. Sebaaly and Nader Tabatabaee, (Road and Airport Pavement Response Monitoring Systems, Vicent C. Lance et and Robert A. Estadolites tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p382-396.

1992), p382-396.
Measurement of Airfield Pavement Response Under Moving Aircraft Loads, Dennis R. Hiltunen and Albert J. Bush, Ill., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p336-351.
New Total Sediment-Load Sampler, Leo C. van Rijn and Moustafa T. K. Gaweesh, HY Dec. 92, p1686-1691.
Pavement Response Measuring System, M. de Beer, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p78-95.

tems, Vincent 1992), p78-95.

1992, p.78-93. Photogrammetric Solution for Vehicle-Damage Investiga-tion, W. Faig, F. R. Wilson, D. King and T. Y. Shih, TE Nov./Dec. 92, p850-865. Rapid Water Content by Computer-Controlled Micro-wave Drying, Paul A. Gilbert, GT Jan. 91, p118-138.

Machanical aegineering
An Expert System for Impeller Mechanical Design and
Analysis, Wen Jeng Chen and Hong-Tsung Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p936-939.
Micromechanical Model to Predict Sand Densification by
Cyclic Straining, Ricardo Dobry and Emmanuel
Petrakis, EM Feb. 90, p288-308.
Probabilistic Mechanics and Structural and Geotechnical
Reliability, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp.

Retiaibility, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp.
Mechanical properties
Composite Materials for Structures on Planetary Surfaces, Donald W. Radford, Willy Z. Sadeh and Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1297-1308.
Constitutive Modeling for Material with Perfect Disordered Heterogeneity, X. Lee and C. S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p445-448.
Effect of Strain Rate on Material Properties of Sheet Steels, M. Kassar and W. W. Yu, ST Nov. 92, p3136-3150.

Experimental Investigation of Bending and Twisting Coupling in Thin-Walled Composite Beams, Lawrence C. Bank and Steven J. Smith, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p884-887.

1992), p884-887.
Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchors, O. Chaallai and B. Benmokrane, (Materials: Performance and Prevention of Deficiencies and Faltures, Thomas D. White, ed., 1992), p606-617.
Hygrothermal Effects on Mechanical Properties of Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Feb. 92, p567-581.
Joint Network Modeling and Scale Effects in Rock, P. H. S. W. Kulatilake, Shuxin Wang and Hasan Ucpirti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p441-444.

The Mechanical Aging of Soils, John H. Schmertmann, GT Sept. 91, p1288-1330.

GT Sept. 91, p1288-1330.

Mechanical Characterization of the Soft Tissue in Horse
Hooves, Harry A. Hogan and David M. Hood, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p147-150.

Mechanical Properties of Compacted Lunar Simulant
Using New Vacuum Triaxial Equipment, Chandra S.
Desai, Hamid Saadatmanesh and Tom Allen, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1240-1249.

Mechanical Properties of High Performance Conceptes.

Miller, ed., 1992), p1240-1249.
Mechanical Properties of High Performance Concretes, Shuaib H. Ahmad, Paul Zia, Mike Leming and M. R. Hansen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p864-867.
Mechanical Properties of Lunar Soil and Simulants, Valery V. Gromov and W. David Carrier, Ill., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p518-527.
Mechanical Propoerties of Microfine Cement/Sodium Sili-

Miller, ed., 1992), p518-527.
Mechanical Properties of Microfine Cement/Sodium Siticate Grouted Sand, Raymond J. Krizek, Hung-Jiun Liao and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p688-699.
Micromechanical Characterization of Damage-Plasticity in Metal Matrix Composites, George Z. Voyiadjis and Peter I. Kattan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p103-106.

Micromechanics and Effective Properties of Elastic Par-ticulate Composites, J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p95-98.

Neural Network Modeling of the Mechanical Behavior of Sand, Glenn W. Ellis, Chengwan Yao and Rongda Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p421-424.

Nonlinear Behaviour of Schneebeil Packings, Daniel Bideau, Jean-Paul Troadec and Claude Poirier, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p167-170.

Niedzwecki, ed., 1992, plo1-1/0.
Probabilistic Micromechanics in Constitutive Modeling of Granular Material, Ching S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p437-440.
Properties of Composites Using Recycled Plastics, Karim S. Rebeiz, David W. Fowler and Donald R. Paul, (Material Conference of Composites)

S. Rebeiz, David W. Fowler and Donald R. Paul, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381.
Selection and Laboratory Evaluation of Modifying Additives for Soil-Cement-Bentonite, T. S. McFarlane and R. D. Holtz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1006-1018.

Ilan Juran, ed., 1992), p1006-1018.

Strength and Fracture of Glass in the Lunar Environment, Daniel D. Allen, W. Howard Poisl and Brian D. Fabes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1232-1239.

Utilization of Carbide Lime Waste in Cement Mortar Mixes, Waheeb A. Al-Khaja, Ismail M. Madany and Mohammed H. Al-Sayed, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p320-331.

Vacuum Melting and Mechanical Testing of Simulated Lunar Glasses, J. E. Carsley, J. D. Blacic and B. J. Piet-ka, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1219-1231.

Variability Response Functions and Stochastic Field Dis-

Variability Response Functions and Stochastic Field Dis-cretization in Stochastic Finite Element Methods, Tsuyoshi Takada, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p116-119.

Adaptive and Parallel Methods for Nonlinear Solid Mechanics, T. Belytschko, L. P. Bindeman, H. Y. Chiang, E. J. Plaskacz and I. S. Yeh, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p27-41.

Basic Aspects of Damage Mesomodelling, P. Ladeveze and O. Allix, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p373-376.

Computational Laboratory for Discrete Element Geome-chanics, John M. Ting and Brent T. Corkum, CP Apr. 92, p129-146.

Computer Simulation of Granular Flows, Thomas G. Drake, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p752-755.

and John M. Niedzwecki, ed., 1992), p752-755.

Damage Dependent Micromechanics in Metal Matrix Composites, R. H. Jones, D. H. Allen and J. G. Boyd, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p99-102.

Damage Mechanics Modeling of the Cyclic Behavior of Plain Concrete, S. Yazdani, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p377-380.

Discrete Matron. Person.

Discrete Markov Process Approach to Fatigue Crack Growth, T. J. Enneking and B. F. Spencer, Jr., (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p792-795.

Discrete Mechanics of Sediment Transport, Peter K. Haff, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p756-759.

An Exact Expression for the Distribution of Linear Combinations of Uniform Random Variables, Chung-Chih Lin and Marc P. Mignolet, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p555-558.

Floor Live Load Models and Pattern Load Effects, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p503-506.

Inverse Problems in Biomechanics, Utpal Roy and Gautam Ray, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p980-983.

and John M. Niedzwecki, ed., 1992), p980-983.
Mathematical Characterization of Fabric and Its Use in Mechanics of Geomaterials, B. Muhunthan and J. L. Chameau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p725-728.
Mechanics of Granular Materials at Very Low Effective Stress Levels, Stein Sture, Nicholas C. Costes and David F. McTigue, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1038.
Mechanics of Granular Defenently States.

Mechanics of Growing Deformable Solids: A Review, V. E. Naumov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p510-513.

Neural Network-based Modeling of Composite Material with Emphasis on Reinforced Concrete, X. Wu and J. Ghaboussi, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1179-1196.

Numerical Integration of Transient Creep Constitutive Equations for Polycrystalline Ice, S. Shyam Sunder, Alex A. Elvin and S. Nanthikesan, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p429-432.

On a Micromechanical Basis of Stochastic Constitutive Laws, Martin Ostoja-Starzewski, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1902) - 1844 1877. 1992), p184-187.

1972, p104-12.
1972, p104-12.
On a Procedure to Estimate the Reliability of Mechanical Components, G. I. Schuëller, C. G. Bucher and H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

p451-454.
On the Role of Experimental Mechanics in Assessing the Performance of Concrete, Stuart E. Swartz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p119-122.
Parallelization of Linear Finite Element Analysis, Gwolong Lai and Hsin-Chu Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p655-662.
Parameter Estimation in Complex Linear Structures. M.

1992), p603-662.
Parameter Estimation in Complex Linear Structures, M. R. Banan, M. Banan and K. D. Hjelmstad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p571-574.
Probabilistic Assessment of Composite Structures, Cristics C. Chamis and Michael C. -Y. Shiao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedewecki, ed., 1992), p543-547.
Probabilistic Mechanics in Civil Engineering, James T. P.

Probabilistic Mechanics in Civil Engineering, James T. P. Yao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p42-50.

Probabilistic Rotordynamics Analysis Using an Adaptive Importance Sampling Method, Y.-T. Wu, T. Y. Torng, O. H. Burnside and M. H. Rheinfurth, (Probabilistic Mechanics and M. H. Rheinfurth, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), 9491-494.
Pseudo-Simulation Method for Stochastic Problems, B. A. Zeldin and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p37-40.

Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, R. H. Sues and L. A. Twisdale, (Frobabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p511-514.

Retrospect and Prospect: Micromechanics, Sia Nemat-Nasser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p632.

Risk Based Optimal Fatigue Testing, J. D. Sørensen, M. H. Faber and I. B. Kroon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p523-526.

Slepian Process of a Non-stationary Process, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p296-

Stability Analysis in Geomechanics by Linear Programming. I: Formulation, Poon-Hwei Chuang, GT Nov. 92, p1696-1715.

A Statistical Method for the Reliability of Mechanical Components, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p440-442.

Stochastic Finite Elements and Reliability Analysis, Lucia Faravelli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Stress Transfer Within Granular Geomaterials, Gabriel Auvinet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p159-162.

Three-Dimensional Fracture Process Zone Detection in Concrete, K. D. Basham, Y. C. Jean and K. P. Chong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p401-404.

Opportunities and Constraints for the Innovative Geo-technical Contractor, Peter J. Nicholson and Donald A. Bruce, (Excavation and Support for the Urban Infra-structure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p46-64.

Resolving Construction Disputes by Mediation: Hong Kong Experience, Kwok-Wing Chau, ME Oct. 92, p384-393.

Analysis of Membrane Penetration in Triaxial Test, Steven L. Kramer, N. Sivaneswaran and R. O. Davis, EM Apr. 90, p773-789.

Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p272-290.

Better Cover-Ups, Robert M. Koerner and David E. Dan-iel, CE May 92, p55-57.

Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-281.

Construction of Urugua-I RCC Dam, Juan Buchas and Fotio Buchas, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed.,

1992), p258-271. Density Changes During Undrained Loading— Membrane Compliance, Mark D. Evans, GT Dec. 92,

p1924-1936. An Elasticity Solution for a Transversely Isotropic Material Containing a Spherical Shell Under Arbitrary Assisymmetric Loading, J. -Y. Wang and S. M. Heinrich, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1020-1023.

Finite Element Modeling of Concrete Expansion and Confinement, F. J. Vecchio, ST Sept. 92, p2390-2406.

Flexible Membrane Wave Barrier, Gary O. Thompson, Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), pl 29-148.

Inflatable Structures of Non-Circular Cross Section, Eric E. Matsumoto, Shayan Pazargadi and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p147-158. Inflation Instability of Cylindrical Membranes, Baoqing Yu, William A. Nash and Thomas J. Lardner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p916-919. Membrane Compliance and Liquefaction of Shived

Membrane Compliance and Liquefaction of Sluiced Gravel Specimens, Mark D. Evans, H. Bolton Seed and Raymond B. Seed, GT June 92, p856-872.

Raymond B. Seed, GT June 92, p856-872. Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, Zhihuai Xue, Zhongling Hua, Qi Li and Naiyi Yao, (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p376-381. Tapered Insulation Builds up Roof, CE May 92, p98. Tensile Terminal, Horst Berger and Edward M. De Paola, CF Nov. 97, p46.42.

CE Nov. 92, p40-43.

330

Membranes, linings
Permeation of Organic Chemicals Through HDPE
Geomembranes, Joni P. Sakti, Jae K. Park and John A.
Hoopes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p201-207.

Membranes, roads

Concrete Surface Treatments—A Selection Guide, P.
James Bruner, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White,
ed., 1992), p476-482.

Passaneat Improvement with Asphaltic Membranes, Ilan

Pavement Improvement with Asphaltic Membranes, Ilan Ishai, Nathan Livnat and Moshe Livneh, (Grouling, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1067-1079.

Mergers
Thoughts on Management of Acquisitions, Melville Hensey, ME Apr. 92, p130-137.

Mesh generation
Computer Graphics in Detailing Strut-Tie Models, Abdulsalam Alshegeir and Julio Ramirez, CP Apr. 92, p220-232

Evaluation of Modelling Parameters for Simulation of Es-tuarial Systems, Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p707-719.

Swanson, ed., 1992), p/01-719.

Generalized Isoparametric Coordinate Determination Scheme for Finite Element Mesh Generation, Victor N. Kaliakin, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p928-931.

Mesh Generation for Estuarine Flow Modeling, Norman L. Jones and David R. Richards, WW Nov/Dec. 92,

p599-614. Mesh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p323-328. Transition Plate-Bending Elements for Compatible Mesh Gradation, Chang-Koon Choi and Yong-Myung Park, EM Mar. 92, p462-480.

The Behavior and Effects of the Noble Metals in the DWPF Melter System, Nick D. Hutson and Mike E. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

High Level Radioactive Waste Management Program Committee, 1992), p541-548. Bioleaching of Metals from Sewage Sludge by Sulfur-Oxidizing Bacteria, J. F. Blais, R. D. Tyagi and J. C. Auclair, EE Sept./Oct. 92, p690-707. Creep and Creep Rupture of Metallic Composites, D. N. Robinson, W. K. Binienda and M. Miti-Kavuma, EM. Aug. 92, p1646-1660.

Damage Dependent Micromechanics in Metal Matrix Composites, R. H. Jones, D. H. Allen and J. G. Boyd, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p99-102.

The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, Marek-Jerzy Pindera and Alan D. Freed, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272.

Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 250-1261.

Sture, ed. and Russell J. Miller, ed., 1992), p1250-1261. Extended-Life Nuclear Waste Package Utilizing Redundant Corrosion/Containment Barriers, F. E. Goodwin and R. E. Westerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1681-1686. Failure Prediction of Anisotropic Material, Photios P. Papados and Paul N. Roschke, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1012-1015. Flux of Metals Between Sediment and the Water Column, N. S. Simon and K. O. Dennen, (Hydraulic Engineering, Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p390-391. Fracture Toughness of DMMC, Richard J. Arsenault,

ed., 1992), p390-391.
Fracture Toughness of DMMC, Richard J. Arsenault, 
[Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p228-231.
Hydrogen Generation During Treatment of Simulated 
High-Level Radioactive Waste with Formic Acid, J. A. 
Ritter, J. R. Zamecnik and C. W. Hsu, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p549-556. p549-556.

p549-556. Improved Performance of Activated Sludge with Addition of Inorganic Solids, Robert B. Bowen and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p474-479. Lunar Oasis, Michael B. Duke and John Niehoff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p48-68.

Miller, ed., 1992), pas-06.
Metal Hydroxide and Metal Oxide Enhanced Activated
Sludge: An Industrial Strength Wastewater Treatment
Process, Robert B. Bowen, (Environmental Engineering. Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p646-655.

Micromechanical Characterization of Damage-Plasticity in Metal Matrix Composites, George Z. Voyiadjis and Peter I. Kattan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p103-

106.
Necking of Creep-Cavitating Bars, C. H. Lu and A. J. Levy, EM Apr. 92, p746-762.
Occurrence of Metallic Phases in Spent Nuclear Fuel: Significance for Source Term Predictions for High-Level Waste Disposal, English C. Pearcy and Hersh K. Manaktala, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p131-136.
On Orbit Chiplest Citizen and Tube Welding in Sance

On-Orbit Chipless Cutting and Tube Welding in Space Station Freedom, William R. Wessels, Mitchell D. Mulder and Brace B. Daniel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p815-

826.

Properties of Solidified/Stabilized Chromium Contaminated Soil, Beth C. Fleming and M. John Cullinane, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1204-1209.

Recovery of Metals from Water Using Ion Exchange, Thomas A. Hickey and David K. Stevens, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515.

Simple Cord Composites, Anthony J. Paris, Ching-Chang Lin and George A. Costello, EM Sept. 92, p1939-1948. Structural Evaluation of Box Culverts, Shad M. Sargand, Glenn A. Hazen and John O. Hurd, ST Dec. 92, p3297-3314.

p3297-3314.

Structural Performance of Hardwood-Metal Composite Beams, Robert H. Kim and Jai B. Kim, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p718-731.

Thermal Stresses in Bi-Coated Structures, Mauro Ferrari and Luca Lutterotti, EM Sept. 92, p1928-1938.

Toxic Metals Reduction Process for Waste Sludge, Joseph G. Rabosky and Kashi Banerjee. (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p388-393.

Meteorological data

Analysis of Evaporative Flux Data for Various Climates, Gabriel G. Katul, Richard H. Cuenca, Philippe Grebet, James L. Wright and William O. Pruitt, IR July/Aug. 92, p601-618.

Meteorological Aspects of Drought, Richard L. Eddy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p329-333.

Meteorology
BEST: New Satellite Mission Dedicated to Tropical Sys-tem Energy Budget, M. Orgeret, AS Jan. 92, pl-11.

tem Energy Budget, M. Orgeret, AS Jan. 92, p1-11.
Estimation of Wind Fields for Coastal Modeling, Edward
F. Thompson and Zeki Demirbilek, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p364-573.

Integrated Assessment of Acid-Deposition Effects on Lake Acidification, Edward S. Rubin, Mitchell J. Small, Cary N. Bloyd and Max Henrion, EE Jan./Feb. 92, p120-134.

The Landfall of Hurricane Hugo, Billy L. Edge, Ben L. Sill and Orville T. Magoon, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p988-993.

Meteorological Aspects of Drought, Richard L. Eddy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), 9329-333.

1772h, p32F-333.
An Overview of the Yucca Mountain Global/Regional Climate Modeling Program, Robert P. Sandoval, Yugal K. Behl and Starley L. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1188-1195.

Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Seasonal Timescale, Eugene J. Wei, (Estuarine and Coastal Modeling, Malcolm L. Spalding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p430-440.

Projectile Shape and Material Effects in Hypervelocity Impact Response of Dual-Wall Structures, William P. Schonberg and Kent Darzi, AS Oct. 92, p405-424.

Accounting for Uncertainty in Natural Systems, Milton E. Harr, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1612-1616.

Analysis of Uncertainty in Geotechnical Site Investiga-tions, and Why, Milton E. Harr, High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste N p755-758

Are Existing Traffic Methodologies Realistic? Nelson B. Nuckles, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p211-216.

Are High and Low Flow Habitat Values Really the Same? Terry Waddle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p374

Comparison of Rigorous Slope Stability Methods: Stati-cal Aspects, Dov Leshchinsky, (Stability and Perform-ance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1070.

A Computational Berthing Model for the Design of Fender Systems, John R. Headland, (Ports '92, David Torseth, ed., 1992), p480-492.

Design Storms for Emergency Spillways of SWM Ponds, Oner Yucel, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p934-939.

Determination of Critical J-Integral for Wood, Kirst Riipola and Mikael Fonselius, ST July 92, p1741-1750.

A Dual Level Methodology for Stormwater Detention Basin Design, Donald V. Chase and Lindell E. Ormsbee, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p849-854.

Estimating Urban and Suburban Sewerage Flows with As-sistance of GIS Technology, Paul Kirshen, Daniel Nyule and John Corlins, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions,

Evaluating Lunar Base Conceptual Designs, Brent Hel-leckson, Richard Johnson and George W. Mor-genthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p213-223.

Generalized Least Squares Analyses for Hydrologic Regionalization, Jery R. Stedinger and Gary D. Tasker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p7-12.

Hydraulic Properties of a Fine-Grained Soil Under Vari-ous Capillary Pressures and Loadings, Aladdin Snaith and John D. Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p648-

Information Theory and Multi-Objective Evaluation, Jay R. Lund and Morris Israel, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

p486-491.

- Methodology Developed by the French National Nuclear Waste Management Agency (ANDRA) for the Performance Assessment of a Deep Geological Repository, P. Raimbault, C. Izabel and J. M. Peres, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p510-516.
- A New Methodology for Repository Site Suitability Eval-uation, Ian Miller, Richard Kossik and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p494-501.
- Nonlinear Dynamic Response of Framed Structures Using the Mode Superposition Method, Mohamed W. Fahmy and Ahmad H. Namini, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 947-460.
- Nonstationary Response Characteristics of Linear MDOF Systems, K. Papadimitriou and J. L. Beck, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p572-575.
- Offshore Pile System Reliability, Wilson H. Tang and Robert B. Gilbert, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p228-231.
- An Optimization Methodology for Crew Assignment Based on Maximizing Labor Productivity, John A. Kuprenss and Anthony D. Songer, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p182-189.
- Plot-scale Field Experiment of Surface Hydrologic Processes with EOS Implications, Charles A. Laymon, Emir J. Macari and Nicholas C. Costes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 2002-2008. p2082-2093.
- Procedures for Evaluating Aggregate Gradation Specifica-tions, Edwin C. Novak, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p261-274.
- A Proposed Methodology for Ranking Space Resource Utilization Processes, R. D. Waldron and A. H. Cutler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p690-703.
- Qualitative Evaluation of Preliminary Structural Designs, Luis M. Bozzo and Gregory L. Fenves, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p89-96.
- Regularization Methods for Identification of Structural Damage, H. G. Natke and J. T. P. Yao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p676-680.

A Spacer Grid Hysteretic Model for the Structural Analysis of Spent Fuel Assemblies Under Impact: SAND91-2528C, TTC-1114, Peter R. Barrett, I. Kurkchubasche and Kevin D. Seager, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p.2249-2254.

Standard Methodologies for the Forensic Investigation of Pavements, James O'Kon, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p931-38.

Stochastic Modeling of Fatigue Crack Growth with Retardation, Dhirendra Verma, Dario A. Gasparini and Fred Moses, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p433-436.

Structural Design Methodology of Large Space Structure, Ralph J. Dornsife, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1022-1034.

Systems-Engineering Methodology for Engineering Planning Applications, Brian G. Hoefler and Brian W. Mar, El Apr. 92, p113-128.

A Two-Stage Safety Assessment Methodology for Construction Activities, M. H. M. Hassan and B. M. Ayyub, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. L. Lin, ed., 1992), p515-518.

Verification of an Alluval Fan Drainage Design Methodology for Transportation Alignments, Syndi J. Flippin and Richard H. French, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p575-580.

Metric systems
Diffuse Double-Layer Equations in SI Units, Albert T.
Yeung, GT Dec. 92, p2000-2005.
Metric Construction Cost Data Available, NE Sept. 92,

p14.

Metrication and Building Products: Soft or Hard Conversion, NE June 92, p13.

Metrication Between Canada and the USA—A Staged Adoption, George E. Maddox, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p50-593.

Metrication of Construction—A Message to the American Society of Civil Engineers, Thomas R. Rutherford, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p577-583.

More Praise for Metric (Itr), Fritz Fenger, CE Mar. 92.

More Praise for Metric (ltr), Fritz Fenger, CE Mar. 92,

p.36.

No More Newtons (Itr), J. F. Polma, CE Nov. 92, p.36.

United States Metrication and the EC 92, A. I. Johnson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992, p.571-576.

Water Data of the International Boundary and Water Commission, Conrad G. Keyes, Jr. and Kenneth N. Rakestraw, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p584-589.

Mexico Design of Pena Colorada Tailings Retention Dam, Don-ald L. Sexton, James W. Carpenter and Ernest K. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374

388.

La Villita Dam Response During Five Earthquakes Including Permanent Deformation, Ahmed-Waeil M. Elgamal, Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, pl.443-1462.

Three-Dimensional Seismic Analysis of La Villita Dam, A.-W. Elgamal, GT Dec. 92, pl.937-1958.

Water Data of the International Boundary and Water Commission, Conrad G. Keyes, Jr. and Kenneth N. Rakestraw, (Irrigation and Drainage: Saving a Threatended Resource—In Search of Solutions, Ted Engman, ed., 1992), p584-589.

Yielding of Mexico City Clay and Other Natural Clays, J. A. Diaz-Rodríguez, S. Leroueil and J. D. Alemán, GT July 92, p981-995.

Michigan
The 1984 Major Rehab of the Muskegon Harbor, MI
South Breakwater: An Extreme Example of Misguided
Design of a Stone Structure, Charles N. Johnson, (Durability of Stone for Rubble Mound Breakwaters, Orville
T. Magoon, ed. and William F. Baird, ed., 1992),
p238-235.

Motown Tunneling, Paul Tarricone, CE Apr. 92, p60-61.

Micro piles Minipile Milestone in Memphis, Loren D. Flick, A. E. "Ted" Graham, Michael J. Marasa, Nigel B. R. Osborn and Frank T. Tobey, III., CE Sept. 92, p46-49.

Microbes

Ricroses

Fifect of Nitrogen on Yield Using Bioenergetics Theory,
R. L. Droste, EE Sept./Oct. 92, p814-820.

Process Offers New Way to Control Nitrogen, CE June
92, p28-29.

J. Le-2-9.
 Regenerative Life Support Technology Challenges for the Space Exploration Initiative, Vincent J. Bilardo, Jr. and Ronald L. A. Theis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1748-1764.

Microbial activity
Bioleaching of Metals from Sewage Sludge by Sulfur-Oxidizing Bacteria, J. F. Blais, R. D. Tyagi and J. C. Auclair, EE Sept./Oct. 92, p690-707.

Auctair, E. Sept./Oct. 92, p690-707.
Characterization of a Heavy Metal Contaminated Site,
M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty,
I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p463-467.
Microbiologically Induced Corrosion, P. J. B. Scott and
Michael Davies, CE May 92, p58-59.

Microcomputers

3D Analyses of Complex Buildings on Micros, Istvan Kadar and Ricardo A. A. Todeschini, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p551-557.

Civil Engineering Curriculum Computer Integration 1992, Robert M. Henry, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1226-1233.

Comprehensive Resignal Society Symposium, p1226-1233.

p1226-1233.

Comprehensive Regional Socioeconomic Simulation System, Gwan Kim, Pyong Sik Pak and Yutaka Suzuki, UP Sept. 92, p81-96.

Computer-Aided Support for Water Quality Modeling of the Russian River, John F. DeGeorge and Gerald T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p182-187.

Development Impact Assessment with Transportation

Mohammad Karamouz, ed., 1992), p.182-187. Development Impact Assessment with Transportation Models. John Loper and Robert C. Hazlett, Jr., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.233-257. Environment for Educational Use of Professional Engineering Software, Richard Sause, John L. Wilson, Mart Tamaro and Brenda Wildrick, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.214-221.

stium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p214-221
An Experimental Model Using a Graphical User Interface, David G. Kleinschmidt and Bryan R. Pearce, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), p36-47.
A Graphical Post-Processor for CE-QUAL-W2, Paul M. Craig, Kenneth C. Black and Robert E. Yager, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed. Ralph Cheng, ed. and Craig Swanson, ed., 1992), p61-71.
Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, Guido Schattanek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p315-326.
Lagrangian Transport Simulation Using Video Images to Store and Retrieve Parameters, Poojitha D. Yapa and Jay B. Perry, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p13-25.

LASSAP, Stress and Settlement Analysis and Design Program, Clarence Jiang, K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p426-433.

Microcomputer Analysis of Guyed Towers as Lattices, Raja R. A. Issa and R. Richard Avent. ST Apr. 91.

Microcomputer Analysis of Guyed Towers as Lattices, Raja R. A. Issa and R. Richard Avent, ST Apr. 91, p1238-1256.

A Microcomputer-Based Model for Identifying Urban and Suburban Roadways with Critical Large Truck Accident Rates, J. D. Brogan and J. W. Cashwell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p432-436.

Microcomputer-Based Project Management for Small En-gineering Firms, Thomas E. Glavinich, ME Jan. 92, p53-62.

p53-62. Neural Network for Predicting Concrete Strength, Trefor P. Williams, Anil Khajuria and P. Balaguru, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1082-1088. A PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Eoin Howlett and Daniel L. Mendelsohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500. A Primer for the Analysis of Composite Beams. E. C.

1992), p489-500.
A Primer for the Analysis of Composite Beams, E. C. Oguejiofor, M. U. Hosain and Jianing Ju, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1212-1219.
SCS Water Surface Profile Model—WSP2, William H. Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p859-864.

BIOWMIK, ed., 1992), B539-864.
Shell/Toolkit for Multimedia Educational Applications, Boyd C. Paulson, Jr., Mohan Manavazhi, Hossam El-Bibany and Rafay Khan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p348-355.

User-Friendly PC-Based Design Package for Gravity-Type Seawalls, K. W. Chau, WW May/June 92, p267-279.

Using Simulation Software to Build Conceptual Models in Civil Engineering, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244.

Microtunneli

Manholes and Microtunneling, Evarett Cruz, Jr., CE Dec. 92, p52-55.

Microtunneling Used for Deep Urban Construction, CE Feb. 92, p26.

Microwaves
Rapid Water Content by Computer-Controlled Microwave Drying, Paul A. Gilbert, GT Jan. 91, p118-138.
Simple and Efficient Methods to Produce Construction
Materials for Lunar and Mars Bases, Yoji Ishikawa,
Tetsuo Sasaki and Tetsumi Higasayama, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p1335-1346.

Middle East

Investigation of Concrete at a Middle East Plant, Jerome P. O'Connor, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p505-518.

Ilgration
teterministic and Probabilistic Performance Assessment
Methods Applied to Radionuclide Migration Through
Fractured Geologic Medium, A. B. Gureghian, Y.-T.
Wu and B. Sagar, (High Level Radioactive Waste Management, High Level Radioactive Waste Mangement Program Committee, 1992), p985-993.

Program Committee, 1992), p985-993.

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, John L. Smoot, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p345-351.

Effects of Viscosity on Migration of Spills of Hazardous Liquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Bennings, ed. and Nani G. Bhowmik, ed., 1992), p784-789.

Method to Inhibit Technetium Migration in a Geologic Repository, Virlynda Statler and William H. Ellis, (High Level Radioactive Waste Management Program Committee, 1992), p1985-1990.

Methodology Developed by the French National Nuclear Waste Management Agency (ANDRA) for the Performance Assessment of a Deep Geological Repository, P. Raimbault, C. Izabel and J. M. Peres, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p510-516.

Migration of Spilled Oil from Ruptured Underground Crude Oil Pipelines in the Memphis Area, Otto J. Helweg, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992),

p140-152.

Moisture Migration Through Concrete Floor Slabs, Robert W. Day, CF Feb. 92, p46-51.

New Tools to Aid in Scientific Computing and Visualization, Michael G. Wallace and Tracy L. Christian-Frear, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p462-468.

Quantitative Comparison Between Colloidal and Solute Transport, J. Y. Chung and K. J. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Committee, 1992), p1966-1971.

The Role of Natural Analogues in Performance 1992),

Disco. 1711.
The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1429-1436.

Military engineering
The Army Aviation Team from a Military Civil Engineer's Perspective, Paige E. Johnson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p72-108.

Exhibit Will Document War-Era Construction, CE Sept.

92, p22

General Williams Named Chief of Army Corps of Engi-

92, p.22.

General Williams Named Chief of Army Corps of Engineers, NE Oct. 92, p4.

Group Prioritization System for Army Military Construction, Bruce C. Goettel, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p49-56.

Gulf War Gave Relevant Engineering Highlights (ltr), Jon B. Kasner, CE June 92, p37.

Hydraulics of Dams from a Military Perspective, Ralph A. Wurbs, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p701-706.

Is the Knowledge Innovative? (ltr), Robert R. Bullard, CE May 92, p32-33.

Knowledge is Important No Matter Its Source (ltr), Jon B. Kasner, CE May 92, p30, 32.

Military Toxics in Hot Water, CE Sept. 92, p30.

New Tanks Stop Leaks at Army Base, CE Oct. 92, p88.

The Potential Application of Military Fleet Scheduling Tools to the Federal Waste Management System Transportation System, I. G. Harrison, R. B. Pope, R. D. Kraemer and M. R. Hilliard, (High Level Radioactive Waste Management Program Committee, 1992), p1324-1329.

Seabees Celebrate Golden Anniversary, NE Mar. 92, p3.

The U.S. Naval Facilities Offshore Pistform Inspection, Maintenance, Repair and Rehabilitation Program, T. Regin and T. O'Boyle, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p531-545.

Mine drainage

Mitesation of Acidic Mine Drainage: Engineered Soil Bar-

Mine drainage Mitigation of Acidic Mine Drainage: Engineered Soil Bar-riers for Reactive Tailings, Abdel-Mohsen O. Mohamed, Raymond N. Yong and Boon K. Tan, Envi-ronmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462.

Mine wastes

Mine wastes
Characterization of a Heavy Metal Contaminated Site,
M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty,
I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p463-467.
Highway Construction Use of Wastes and By-Products,
Robert J. Collins and Stanley K. Ciesielski, (Utilization
of Waste Materials in Civil Engineering Construction,
Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed.,
1992), p140-152.

Mitigation of Acidic Mine Drainage: Engineered Soil Barriers for Reactive Tailings, Abdel-Mohsen O. Mohamed, Raymond N. Yong and Boon K. Tan, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462.

Mineral deposits

334

Apollo 11 Ilmenite Revisited, E. N. Cameron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p242-2433.

On the Beneficiation and Comminution of Lunar Rego-lith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138.

Preliminary Design of an Underground Lunar Mine, Scott B. Berk and Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1171-1182.

pl171-1182.

Recent Developments of the Carbotek Process for Production of Lunar Oxygen, Christian W. Knudsen, Michael A. Gibson, David J. Brueneman, Seishi Suzuk, Tetsuji Yoshida and Hiroshi Kanamori, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p597-605.

Rocket Fuel to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2271-2281.

The Small Mars Rover, A. L. Kemurdjian and V. V. Gro-mov, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p390-397.

Application of Results from the Poços de Caldas Project in the Kristallin-I HLW Performance Assessment, I. G. McKiniey, W. R. Alexander, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p357-361.

Integration of Chemical and Cement Grouting Techniques for Controlling Mine Water Inflows through Fractured Ground, Trevor G. Carter, Stephen H. E. Phillips and Patrick C. Cochrane, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-

The Potential Fate of Particulate Contaminants from the Rehabilitated Ranger Uranium Mine, S. J. Riley and P. W. Waggitt, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p884-889.

Preliminary Design of an Underground Lunar Mine, Scott B. Berk and Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1171-1182.

Variations in Curve Number for a Reclaimed AML Site, K. James Fornstrom and James L. Smith, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p389-394.

Recent Experiences in PC Software Development, Kenneth M. Will, Asquith Bailey and Timothy Dodd, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1195-1203.

Assessing Lunar Resources with Remote Sensing, Sandra C. Feldman and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

Decorpts and Difficulties, Lawrence A. Taylor and David S. McKay, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1058-1069.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1026-1039.

Design of Pena Colorada Tailings Retention Dam, Don-aid L. Sexton, James W. Carpenter and Ernest K. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374-

Engineering, Construction, and Operations in Space III, 2 vols., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, 0-87262-868-X, 2513pp.

Environmental Aspects of Lunar Helium-3 Mining, G. L. Kulcinski, E. N. Cameron, W. D. Carrier, III. and H. H. (Jack) Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p606-616.

Extraterrestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillett and David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1048-1057.

Genesis: The Creation of a Lunar Base, Paul Bialla, Nathan Nottke and Seishi Suzuki, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p13

INTERLUNE Concept for Helium-3 Fusion Develop-ment, Harrison H. Schmitt, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p804-

Laboratory Investigation of Beach Profiles in Tailings Disposal, Xiaosheng Fan and Jacob Masliyah, HY Nov. 90, p1357-1373.

Lunar He-3 Mining: Improvements on the Design of the UW Mark II Lunar Miner, Igor N. Sviatoslavsky, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1080-1091.

Lunar Mining—Surface vs. in Situ—A Comparative Study, Paulo Roberto Pereira, Russell J. Miller and Gary S. Brierley, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 195-1208.

Lunar Oasis, Michael B. Duke and John Niehoff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p48-68.

Mobile Continuous Lunar Excavation, John L. Paterson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 070-1079.

Regulatory Law and Policy to Support Space Mining, Bruce S. Marks and William R. Sharp, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2208-2219.

Ropeway Material Handling Systems for Lunar Mining Sites, H. Peter Huttelmaier and Jonathan R. Carrick, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1116-1126.

Spiral Mining for Lunar Volatiles, H. H. Schmitt, G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170.

Transfer of Terrestrial Technology for Lunar Mining, Robert A. Hall and Patricia A. Green, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1150-1161.

Two Examples of Position Estimation, Gary Shaffer and Ben Motazed, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

## Minority groups

County Defines Minority Program Too Broadly, CE Feb. 92, p28.

Dutton, Tennessee Educator, Dies at 82, NE Apr. 92, p5.

Integrating the Undergraduate Engineering Curriculum, Alice M. Agogino and Anthony R. Ingraffea, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p356-363.

It's Time to Redefine Minority Businesses (ltr), Nina G. Zolten, CE May 92, p30.

Milwaukee Summer Institute Gives Students CE Project Experience, CE Feb. 92, p70,72.

Minority, Women and Small Contractors Boosted in NYC, CE June 92, p22,24.

Providing Lead Role in Work-Force Diversity, Robert E. Wolfe and Marie E. Anspach, El Jan. 92, p38-48.

A Setback for Set-Aside Contracts, Michael C. Loulakis and William L. Cregger, CE July 92, p44.

Technical Personnel Shortages in Construction Industry, Russel C. Jones, El Jan. 90, p16-26.

Preliminary Investigation of a Lunar 16 Meter Optical Telescope, Walter H. Gerstle, N. N. V. Prasad, Kirk Cessac and Thomas Kratochvil, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1921),

Support Structures for High-Resolution Optical Systems, Ralph M. Richard and Daniel Vukobratovich, AS Jan. 92, p24-43.

Thermal Investigation of a Large Lunar Telescope, Sherry T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1842-1852.

## Mississippi River

Characteristics of Waves and Drawdown Generated by Barge Traffic on the Upper Mississippi River System, Ta Wei Soong and Nani G. Bhowmik, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p672-676.

Hydraulic and Geomorphic Classification of the Upper Mississippi River System: Pilot Study of Three Pools, Nani G. Bhowmik and Renjie Xia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p666-671.

New Cable-Stayed Bridge Will Span the Mississippi, CE Feb. 92, p16-18.

The OCEA Awards of Merit, Teresa Austin, CE July 92, p50-53.

Sediment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p677-

Earthquake Hazard Investigative Procedures for Central United States Waterworks, James R. Blacklock, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p1-15.

Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p952.

Prescriptive Model for Missouri River Reservoir-operation Analysis, David T. Ford, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p555-560.

Baltimore City Recycling Program—A Case History, George G. Balog, Kenneth J. Strong and Ellen L. Ko-bler, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p532-536.

Planning Centralized Materials Recovery Facilities, Renée A. Lawver and Jay R. Lund, (Environmental En-gineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p537-542.

Mixing

Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p605-610.

Computer Modeling of Forced Mixing in Waste Storage Tanks, L. L. Eyler and T. E. Michener, (High Level Redioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p636-642.

Destruction of Stratification By Bubble Plume, W. D.

p636-642.
Destruction of Stratification By Bubble Plume, W. D. Baines and A. M. Leitch, HY Apr. 92, p559-577.
Effects of Mixing on Rheological Properties of Microfine Cement Grout, Lois G. Schwarz and Raymond J. Krizek, (Grouting, Soil Improvement and Geosyntheics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p512-525.
Efficiency of Jet Mixing of Temperature-Stratified Water, Heinz G. Stefan and Ruochuan Gu, EE May/June 92, p363-379.

Expert System May Lead to Custom-Made Concrete, CE June 92, p30.

June 92, p30.

The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, Boris Galperin, Alan F. Blumberg and Robert H. Weisberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p32-343.

Longitudinal Dispersion Coefficients in Estuary, I. Guymer and J. R. West, HY May 92, p718-734.

Mixing and Delivery of Roller Compacted Concrete, Robert Oury and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p242-257.

Modeling Low-Flow Mixing through Pools and Riffles, Il Won Seo and W. Hall C. Maxwell, HY Oct. 92, p1406-1423.

ume Movement and Mixing in Heterogeneous Aquifer, ume movement and mixing in Heterogeneous Aquires, Salwa Rashad, John Hoopes, Craig Fergusson and Tswn-Syau Tsay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p180-

185.
Properties of Aggregate-Cement Interface for High Performance Concrete, S. P. Shah, Z. Li and D. A. Lange, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedewecki, ed., 1992), p825-855.
Shallow Soil Mixing—A Case History, David Broomhead and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p564-576.
Stabilization and Fixation Using Soil Mixing, Brian H. Jasperse and Christopher R. Ryan, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1273-1284.

1284.

A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, Kwang-W. You, Lie-Yauw Oey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p453-465.

U.S. Sludge Digesters: From Pancakes to Eggs, Teresa Austin, CE Oct. 92, p36-39.

Velocity Distribution in Uniform Sediment-Laden Flow, Motohiko Umeyama and Franciscus Gerritsen, HY Feb. 92, p229-245.

The Construction of New Victoria Dam, Australia, Robert J. Wark, Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p63-82.

The Design and Construction of Shuikou Project RCC Diversion Wall, Ma Zhong Hang, Cai Heming and E. B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p117-131.

saign of the Boney Falls RCC Emergency Spillway, W. J. Marold, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-

Fundamental Observations on Cement Based Grouts (2): Microfine Cements and The Cemill® Process, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p486-499.

Investigation of a Concrete Blistering Failure, R. S. Rolings and G. S. Wong, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30.

Predictions of Thermal Characteristics for Mixed Porous Media, Yueying Deng, Clifford B. Fedler and James M. Gregory, MT May 92, p185-195.

RCC Mixes and Properties Using Poor Quality Materials-Concepcion Dam, L. Gaekel and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p358-373.

RCC Test Specimen Preparation—Developments Toward a Standard Method, Terrence E. Arnold, Theodore B. Feldsher and Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p341-357.

Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p349-505.

D. Hansen, etc. and Francis G. McLean, ed., Kenneth D. Hansen, ed. and Francis G. McLean, ed.,

Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), pl 32-147.
Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p99-116.
Roller Compacted Concrete Mix Design, Stephen Tatro and James K. Hinds, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p323-340.

Mobility

Mobility
Compaction Grout: Rheology vs. Effectiveness, James Warner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p229-239.

Gonceptual Bed-Load Transport Model and Verification for Sediment Mixtures, Shaohua Marko Hsu and Forrest M. Holly, Jr., HY Aug. 92, p1135-1152.

Instrumentation for Vehicle Mobility Testing in the Frost Effects Research Facility, Elisabeth Berliner and Sally Shoop, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p12-26.

Military Toxics in Hot Water, CE Sept. 92, p30.

Recent Advances in Compaction Grouting Technology, James Warner, Norbert Schmidt, John Reed, Don Shepardson, Russ Lamb and Sam Wong, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p252-264.

p252-204.

Modal analysis
Condition Monitoring of Structures Using Transient Response, George Hearn, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p127-138.

Damage Diagnosis of Steel Frames Using Vibrational Signature Analysis, G. C. Yao, K. C. Chang and G. C. Lee, EM Sept. 92, p1949-1961.

Elastic Wood Properties from Dynamic Tests and Computer Modeling, Sven Ohlsson and Mikael Perstorper, ST Oct. 92, p2677-2690.

First Order Importance Sampling Method and its Variational Condenses.

First Order Importance Sampling Method and its Variance Reduction, Gongkang Fu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p568-571.

Laboratory Tests of Modal Emissions and Off-Cycle Corrections to FTP-75, Mark A. Carlock, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p211-218.

p211-218.

Modal Analysis of Vibration Response for Condition Monitoring of Structures, George Hearn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p940-943.

Modal Identification Algorithm with Unmeasured Input, C. F. Cremona and J. A. Brandon, AS Oct. 92, p442-

C. F

Modal Synthesis Method for General Dynamic Systems, L. E. Suarez and M. P. Singh, EM July 92, p1488-1503.

Parameter Estimations of Structural Dynamic Systems, C.-B. Yun, C.-G. Lee and H.-J. Lee, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p212-215.

Response of Mono-Coupled Distributed Parameter Systems to Random Excitation, D. M. McFarland, L. A. Bergman and G. G. G. Lueschen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p576-579.

Modal superpositi

Modal Coupling Effect of Non-Classically Damping, K. Xu and T. Igusa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p453-

Nonlinear Dynamic Response of Framed Structures Using the Mode Superposition Method, Mohamed W. Fahmy and Ahmad H. Namini, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p457-460.

### Model accuracy

3D Hydrodynamic Model Validation Through Simula-tions of Dynamic Processes, Leif H. Slordal, Eivind A. Martinsen and Alan F. Blumberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p525-537.

Characteristics of MOBILE4 and EMFACTE Models, Ju-lie Fieber, Barbara Austin and Jeremy Heiken, (Trans-portation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.255-570.

Codification of Design Load Criteria Subject to Modeling Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007.

Computerized Transportation Planning Models for Site Impact Analysis: Precision or Complexity? Edward A. Mierzejewski and Timothy Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p128-132.

Correction Criteria of Finite Element Modeling in Struc-tural Dynamics, M. Tong, Z. Liang and G. C. Lee, EM Apr. 92, p663-682.

Apr. 74, p003-042.

Evaluation of Modelling Parameters for Simulation of Estuarial Systems, Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p707-719.

Flawed Assumptions: Why Bridge Deck Joints Fail, Mar-tin P. Burke, Jr., CE Nov. 91, p60-62.

tin P. Burke, Jr., C.E. POV. 21, pool-22. Hydrodynamic and Water Quality Modeling of Lower Green Bay, David J. Mark and Barry W. Bunch, (Estu-arine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p657-668.

Level of Significance Selection in Engineering Analysis, Kaye L. Brubaker and Richard H. McCuen, El Oct. 90, p375-387.

Model Correction via Compatible Element Method, De-Wen Zhang and F. S. Wei, AS July 92, p337-346.

Modeling Guideline for Air Quality Analysis of Intersec-tions, George J. Schewe, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p298-305.

## Model analysis

Correction Criteria of Finite Element Modeling in Struc-tural Dynamics, M. Tong, Z. Liang and G. C. Lee, EM Apr. 92, p663-682.

Flawed Assumptions: Why Bridge Deck Joints Fail, Martin P. Burke, Jr., CE Nov. 91, p60-62.

Modal and Response Analyses of a Paper Machine Foun-dation, Jerry Chen and J. A. Bohinsky, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p574-581.

### Model studies

Comparison of ARS-Type Grade Control Model Testing and Prototype Response, C. Watson, N. Raphelt, P. Combs and S. Abt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p213-

Model Correction via Compatible Element Method, De-Wen Zhang and F. S. Wei, AS July 92, p337-346.

Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-256.

Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersaturation. Perry L. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p311-316.

Fevised Hydraulic Design of the Los Angeles County Flood Control System, Michael E. Mulvihill and Scott E. Stonestreet, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612-

Scale Model to Test Advanced Nuclear Reaction, CE Mar. 92, p22,26.

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p599-605.

Analysis of Cantilever Decks of Thin-Walled Box Girder Bridges, Shih Toh Chang and Jiang Zhi Gang, ST Sept. 90, p2410-2418.

Design Loads for Sloshing in TLP Pontoons Tanks, Stephen W. Balint, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p99-113.

HGL Elevation at Pipe Exit of USBR Type VI Impact Basin, Charles E. Rice and Kem C. Kadavy, HY July 91, p929-933.

Ice Loads on Vertical Bridge Pier at Two Different Model Scales, F. T. Christensen and P. Klinting, CR Sept. 92, p93-110.

Model Tests for Expansion of Anaheim Bay Naval Har-bor, Robert R. Bottin, Jr. and Dan Muslin, (Ports '92, David Torseth, ed., 1992), p768-776.

Physical Model Testing of Broken Armor Stone, Donald L. Ward, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p34-39.

Soil Nailing Shown Seismically Stable, CE Dec. 92, p24.

### Model verification

Model verification
3D Hydrodynamic Model Validation Through Simulations of Dynamic Processes, Leif H. Slordal, Eivind A.
Martinsen and Alan F. Blumberg, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p525-537.
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. II: Verification, Robert Y. Liang and
Fenggang Ma, GT Feb. 92, p246-265.
Calibration and Validation of the Storm Water Manage-

Fenggang Ma, G1 Feb. 92, p246-269.
Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, Raymond M. Wright, Igor Runge, Rajat Roy Chaudhury and Daniel W. Uriah, (Water Resource-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad

running and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467.
Computational Model Verification Test Case Using Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p436-441.
Data Set for Verification of 3 D. Search

Denowmis, ed., 1972), p430-441.
Data Set for Verification of 3-D Free-Surface Hydrodynamic Models, Carquinez Strait, California, P. Esmith, R. N. Oltmann and M. R. Simpson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), p430-435.

Bhowmik, ed., 1992), 94:04-35.
Field Verification of a Wave-Induced Current Model, Jane McKee Smith, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p95-104.

cu., 1772), p93-109.

Ground Water Model Verification and Validation Issues,
Task Committee on the Verification and Validation of
Ground Water Models, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, N. Navayogarajah, C. S. Desai and P. D. Kiousis, EM May 92, p990-1011. Methodology for Validation of a Tampa Bay Circulation Model, Kurt Hess and Kathryn Bosley, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p83-94. Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, Ching S. Chang, Mohammed G. Kabir and Yang Chang, GT Dec. 92, p1975-1992. Modeling Dredged Material Disposed in Onen Water, B. Modeling Dredged Material Disposed in Onen Water, B.

p1975-1992.

Modeling Dredged Material Disposed in Open Water, B.

H. Johnson, D. N. McComas and D. C. McVan, (Hydraulic Engineering: Saving a Threatened Resource. In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1036-1041.

Modeling Vertical Structure of Open-Channel Flows, Alan F. Blumberg, Boris Galperin and Donald J. O'Connor, HY Aug. 22, p1119-1134.

Numerical Model Verification by Prescribed Solutions Forcing—A Test Case, Dick P. Dee, F. Mauricio Toro and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p416-421.

Routing of Heterogeneous Sediments over Movable Bed: Model Verification, Koen R. Vogel, Andre van Niek-erk, Rudy L. Slingerland and John S. Bridge, HY Feb.

92, p263-279

Statistical Evaluation of Mechanistic Water-Quality Models, Kenneth H. Reckhow, J. Trevor Clements and Randall C. Dodd, EE Mar./Apr. 90, p250-268.

Randall C. Dodd, EE Mar./Apr. 90, p230-268.
Validation Issues Associated with Performance Assessment Modeling Activities for High-Level Radioactive Waste Repositories. Thomas J. Nicholson, Charles F. Voss and Johan Andersson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1437-1441.

Management Program Committee, 1992), p1437-1441. Validation of System Models of Deep Geological Disposal of High-Level Nuclear Waste, Bjorn T. Cronhjort and Grant Sheng, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2122-2125. Validation of the SEADYN90 Cable Simulation Model Using a Three-Dimensional Cable Deployment Data Set, Paul A. Palo, Linda C. Teragouchi and Maureen T. Smith, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p273-287. Verification of a 3-D Hydrodynamic Numerical Model, David Daniel Abraham, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p225-230.

1992), p225-230.
Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.
Verification Techniques Used in Modeling Charleston.

1992), p422-427.
Verification Techniques Used in Modeling Charleston Harbor, South Carolina, Samuel B. Heltzel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p257-262.
Water Quality Modelling: Prediction of the Transport of Water Constituents in the Weser Estuary (Germany), Agmar Müller, Iris Grabemann and Bernhard Kunze, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Achievements Within the International INTRAVAL Project, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, dioactive Waste N 1992), p1414-1420.

Adaptive Parameter Estimation for Multisite Hydrologic Forecasting, Haitham M. Awwad and Juan B. Valdes, HY Sept. 92, p1201-1221.

HY Sept. 92, p1201-1221.
Aggradation-Degradation Process in Alluvial Channels, Chin-lien Yen, Shou-young Chang and Hong-Yuan Lee, HY Dec. 92, p1651-1669.
Air Emissions Testing of Air Toxics at WWTPs, Michael J. Barboza, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p79-85.

Analysis of Internal Discontinuities in Geo-Materials, Dunja Perić, Stein Sture and Kenneth Runesson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p292-295.

Analysis of the Georgia Dome Cable Roof, Gerardo Cas-tro and Matthys P. Levy, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p566-573.

Analytical Modeling of Bonded Bars under Cyclic Loads, Parviz Soroushian, Kienuwa Obasaki and Shashidhara Marikunte, ST Jan. 91, p48-60.

Anisotropic Hardening Plasticity Model for Sands, Robert Y. Liang and Hann-Ling Shaw, GT June 91, p913-933.

Assessing the Leaching Potential of Herbicides at the Ohio MSEA, S. R. Workman, A. D. Ward and W. G. Knisel, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p413-418.

Assessment of Impacts Associated with Alternate Cooling System Designs for an Electric Power Station, Steven H. Wolf, James D. Bowen, Donald P. Galya and Frank S. Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231.

Associative Plasticity for Dilatant Soils, Panos D. Kiousis and Ali A. Abdulla, EM Apr. 92, p763-785.

Automated Diffusion Wave Modeling of Watershed Hydraulics, Robert N. Eli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p353-354.

Basic Aspects of Damage Mesomodelling, P. Ladeveze and O. Allix, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p373-376.

Beach-Nourishment Performance Predictions, R. G. Dean and Chul-Hee Yoo, WW Nov-Dec. 92, p567-

Boundary-Conforming Coordinate System for Ground-water and Contaminant Transport Modeling, Xiaoxia Zhao and Victor L. Zitta, (Hydraudic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p192-197.

1992), p192-197.
Chesapeake Bay Field Modeling and Monitoring Projects, Wesley E. Coleman, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p221-233.
Circulation Modelling and Water Quality Prediction, Hans Jacob Vested, Ole Krull Jensen, Ann Christina Ellegaard, Hanne Karin Bach and Erik Koch Rasmussen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p317-331.

1992), p317-331.

Classification of Jointed Rock with Emphasis on Grouting, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p449-460.

A Coastal-Ocean Hindcast/Forecast Model, Ping Chen, Yan-H. Zhang, Kwang-W. You and Lie-Yauw Oey, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p175-187.

Codification of Design Load Criteria Subject to Modeling

Codification of Design Load Criteria Subject to Modeling Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007.

Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007. Combined Allocation and Operation Model, Wytze Schuurmans and Wil N. M. van der Krogt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p269-274. Comparison of Dispersion Models for Wastewater Treatment Emissions, Jin-Sheng Lin and Lynn M. Hildemann, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11.

Comprehensive Regional Socioeconomic Simulation Sys-tem, Gwan Kim, Pyong Sik Pak and Yutaka Suzuki, UP Sept. 92, p81-96.

Compressive Softening Model for Concrete, Eiji Mizuno and Shigemitsu Hatanaka, EM Aug. 92, pl 546-1563.

Computer Graphics in Detailing Strut-Tie Models, Abdulsalam Alshegeir and Julio Ramirez, CP Apr. 92, p220-232.

Computer Simulated Flow of Grouts in Jointed Rock, Lars Hässler, Ulf Håkansson and Håkan Stille, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p461-473.

1992), p461-473.
Cone Models for a Pile Foundation, John P. Wolf, Jethro W. Meek and Chongmin Song, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p94-113.
Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Continuum Model for Flows in Emergent Marsh Vegeta-tion, Lisa C. Roig and Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed. Ralph Cheng, ed. and Craig Swanson, ed., 1992), p268-279.

Correction Criteria of Finite Element Modeling in Struc-tural Dynamics, M. Tong, Z. Liang and G. C. Lee, EM Apr. 92, p663-682.

Cost Models for Preliminary Economic Evaluation of Sprinkler Irrigation Systems, D. Kumar, C. D. Heatwole, B. B. Ross and D. B. Taylor, IR Sept./Oct. 92, p757-775.

Customer Requirements in Industrialized Housing, Robert L. Armacost, Paul J. Componation, Michael A. Mullens and William W. Swart, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p48-57

Damage Dependent Micromechanics in Metal Matrix Composites, R. H. Jones, D. H. Allen and J. G. Boyd, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p99-102.

Damage Mechanics Modeling of the Cyclic Behavior of Plain Concrete, S. Yazdani, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p377-380.

Damage of Concrete in Fatigue, A. Alliche and D. François, EM Nov. 92, p2176-2190.

Prançois, Em Nov. 72, p21 10-2134.

A Decision Support System for Water Quality Modeling, D. S. Yakowitz, L. J. Lane, J. J. Stone, P. Heilman and R. K. Reddy, (Vater Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p188-193.

Definition of a Weighting Function for Rainfall in Aggregated Rainfall-Runoff Models, Paolo Bartolini and Juan B. Valdés, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p537-547.

342.
A Description of LANDSIM and Its Uses, Thomas S. Russell, Jr., Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitter and Michael E. Zientek. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941.

Design and Operation of On-Farm Irrigation Ponds, Bri-iesh Kumar Mehta and Akira Goto, IR Sept./Oct. 92.

p659-673.

Design Cable-stayed Bridge for Cost Effectiveness and Safety, Jih-Jiang Chyu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992),

A Design Component Library Based on Design Standards, M. Maher Hakim and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992b, p105-112.

Developing Protocols for Motor Vehicle Air Quality Modeling, Peter H. Guldberg, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p306-314.

Digital Simulation of Wind Load Effects, Ahsan Kareem and Yousun Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p284-287.

Dynamic Analysis of Sliding Seismic Isolators, Navin-chandra Amin, Anoop Mokha, Stanley Low and Victor Zayas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p320-323.

Dynamic Stability of Composite-Material Circular Cylindrical Shells with Orthogonal Stiffeners, C. W. Bert, C. D. Kim and V. Birman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p652-655.

Earthquake Ground Motion Modeling with Stochastic Line Source, Ruichong Zhang and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.256-259. Economical and Statistical Based On-Farm Irrigation Scheduling, L. Niel Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p146-151. Effect of Static Offset on TLP Modeling, C. Oran, EM Jan, 92, p74-91. Effects of Bottom Friction on Wave Breaking Using RCPWAVE Model, Jerome P.-Y. Maa and S.-C. Kim, WW July/Aug, 92, p387-400. Effects of Drainage and Water-Management Practices on Hydrology, K. D. Konyha, R. W. Skaggs and J. W. Gilliam, IR Sept./Oct. 92, p807-819. Engineering-Econometric Model of Energy Demand, Fabrizio Carlevaro, Jean-Lue Bertholet, Jean-Paul Chaze and Patrick Taffé, EY Aug, 92, p109-121. Estimation of Travel Related Inputs to Air Quality Models, Terry L. Miller, Arun Chatterjee, Jerry Everett and Cindy Mellvaine, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125. Evaluation and Control of Collapsible Soils, Adnan A. Basma and Erdil R. Tuncer, GT Oct. 92, p1491-1504. Evaluation of Supercritical/Subcritical Flows in High-Gradient Channel, Douglas J. Trieste, HY Aug, 92, p1107-1118.

p1107-1118.

An Experimental Model Using a Graphical User Interface, David G. Kleinschmidt and Bryan R. Pearce, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, p36-47.

Experimental Photoelastic Analysis of Tunnels Containing Cracks, Adel Y. Aki, S. S. Abdel Salam, M. H. El Haddad and Gouda A. Mohamed, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p276-279.

Experimental Studies for the Port of Bilbao Extension, José R. Iribarren and María J. Martín, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p149-157.

Expert System for Construction Safety, in Construction Safe

José R. Iribarren and María J. Martín, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p149-157.

Expert System for Construction Safety. I: Fault-Tree Models, Fabian C. Hadipriono, CF Nov. 92, p246-260.

Expert System for Construction Safety. II: Knowledge Base, Fabian C. Hadipriono, CF Nov. 92, p246-260.

Expert System for Construction Safety. II: Knowledge Base, Fabian C. Hadipriono, CF Nov. 92, p261-274.

Facility Management System for Buildings, Edgar Samuel Neely, Jr. and Robert Neathammer. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p129-136.

Feasibility Study of Petroleum Development in the Ross Sea, Antarctica, Dieter Beike, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p341-355.

Finite Element Model for Seismic RC Coupled Walls Having Slender Coupling Beams, Omar Chaallal, ST Oct. 92, p2936-2943.

Finite Element Modeling of Single-Solute Activated-Carbon Adsorption, M. Akram Hossain and David R. Yonge, EE Mar/Apr. 92, p238-252.

Finite Element Modeling of Storm Water Runoff Using GRASS GIS, Baxter E. Vieux and James Westervelt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p712-718.

Flexible Membrane Wave Barrier, Gary O. Thompson, Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p712-148.

Furrow Flow Velocity Effect on Hydraulic Roughness, Thomas J. Trout, IR Nov/Dec. 92, p981-987.

Further Contributions to Reliability-Base Pile-Settlement Analysis, S. T. Quek, Y. K. Chow and K. K. Phoon, GT May 92, p726-742.

Geographical Information Systems (GIS) Technology in Global Environmental Evaluation—An Overview, Robert C. Lozar, (Engineering, Construction, and Operation Modeling of Inflatable Structures for Lunar Base, Paul S. Nowak, Willy Z. Sadeh, ad., Stein Strue, ed. and Russell J. Miller, ed., 1992), p2

Gradual Development of Bores in Canal Systems, Theodor Strelkoff, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p456-461.

340

A Graphical Post-Processor for CE-QUAL-W2, Paul M. Craig, Kenneth C. Black and Robert E. Yager, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p61-71.

Ground Water Model Verification and Validation Issues, Task Committee on the Verification and Validation of Ground Water Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), -30.42 p39-42

Groundwater Management in Southern Florida, Mark M. Wilsnack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ened Resource—In S ed., 1992), p104-109.

ed., 1992), p104-109.

Groundwater Modeling of Wastewater Management Options, Dominique N. Brocard and Angelos Protopapas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p287-292.

Habitat Simulation in United States, Britain, and France, Robert T. Milhous, lan Johnson, Yves Souchon and Sylvie Valentin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p362-367.

367.

HEC-6 Modeling of Sediment Management in Loíza Reservoir, Puerto Rico, Gregory L. Morris and Guangdou Hu. (Hydraulic Engineering: Saving a Threatenet Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p630-635.

Hygrothermal Effects on Load-Duration Behavior of Structural Lumber, Kenneth J. Fridley, R. C. Tang, Lawrence A. Soltis and Chai H. Yoo, ST Apr. 92, p1073-1038.

p1023-1038.

proact on Water Supply of a Seismically Damaged Water Delivery System, M. Shinozuka, H. Hwang and M. Mu-rata, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p43-57

p43-57.
Improved First-Order Uncertainty Method for Water-Quality Modeling, Charles S. Melching and Sharath Anmangandla, EE Sept-/Oct. 92, p791-805.
Improvements on Quantifying Pass-By Trips for Shopping Centers. Pahim F. Benekohal, 63te Impact Traffic Assessment: rioblems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p47-51.

Innovative Intake Design for Raritan River, Paul Y. Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.220-225.

Integrated Assessment of Environmental Risk and Human Response, Mitchell J. Small, (Risk-Based Deci-sion Making in Water Resources V, Yacov V, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1997), p78-91.

Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, Guido Schattanek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p315-326.

Intelligent Objects for Synthesis of Structural Systems, Dionysis R. Rigopoulos and Irving J. Oppenheim, CP July 92, p266-281.

Interactive Base-Isolation Foundation System: I. Finite Element Formulation, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2048-2058.

Intersection Air Quality Analysis, John Zamurs, Robert Conway and Stephen S. Rosen, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992),

Issues in Hydropower Modeling Using GEMSLP Algorithm, K. K. Reznicek and S. P. Simonovic, WR Jan./Feb. 92, p54-70.

Feb. 92, p54-70.

Joint Network Modeling and Scale Effects in Rock, P. H. S. W. Kulatilake, Shuxin Wang and Hasan Ucpirti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedswecki, ed., 1992), p441-444.

Knowledge-Based Modeling of Material Behavior with Neural Networks, J. Ghaboussi, J. H. Garrett, Jr. and X. Wu, EM Jan. 91, p132-153.

Laboratory Tests of Modal Emissions and Off-Cycle Corrections to FTP-75, Mark A. Carlock, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p211-218.

Lagrangian Transport Simulation Using Video Images to Store and Retrieve Parameters, Poojitha D. Yapa and Jay B. Perry, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., erg, ed., Ral 992), p13-25

1992), p13-23.
Load-Duration Effects in Structural Lumber: Strain Energy Approach, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Sept. 92, p2351-2369.
Macromodeling of Complex Composites, P. K. Basu, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedswecki, ed., 1992, p1071-1074.

Managing Lower Colorado River, Daniel P. Sheer, Timo-thy J. Ulrich and Mark H. Houck, WR May/June 92, p324-336.

Measured and Simulated Response of a Small Semisub-mersible Moored in Deep Water, Robert F. Zueck, Stuart F. Pawsey and Steve J. Leverette, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p114-128.

Measured to the Max, Robert Nigbor, Ahmet Cakmak and Robert Mark, CE Nov. 92, p44-47. Mechanism of Biological Treatment in Plug-Flow or Batch Systems, Hasan Ali San, EE July/Aug. 92, p614-628

Mesh Generation for Estuarine Flow Modeling, Norman L. Jones and David R. Richards, WW Nov./Dec. 92, p599-614.

Micromechanical Simulation of Wave Propagation in Dense Granular Assemblies, J. S. Lee, M. Y. Ma and A. B. Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p417-420.

and John M. Niedzwecki, ed., 1992), p417-420.
Minimizing the Risk and Impact of Tanker Accidents, C.
S. Birt and A. J. Jordan, (Ports '92, David Torseth, ed.,
1992), p670-681.
Mobile-Bed Physical Model Tests for the 1992 Olympic
Harbour, L. Moreno, C. Tamayo and J. Losada, (Civil
Engineering in the Oceans V, Robert T. Hudspeth, ed.,
1992), p840-849.

Model for Air Travel Demand, V. R. Rengaraju and V. Thamizh Arasan, TE May/June 92, p371-380.

Model for Estimating Tidal Flushing of Small Embay-ments, Lawrence P. Sanford, William C. Boicourt and Stephen R. Rives, WW Nov./Dec. 92, p635-654.

Model for Prescribing Ground-Water Use Permits, James W. Male and Frederick A. Mueller, WR Sept./Oct. 92, p543-561

odel Study of Jet-Circulated Grit Chamber, Asher Brenner and Mordechai H. Diskin, EE Nov./Dec. 91, p782-787.

Modeling and Analysis of Doubly Curved Aerobrake Truss Structures, Gregory Washington and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1922), p933-944.

Modeling and Pilot-Scale Experimental Verification for Predenitrification Process, J. Hamilton, R. Jain, P. An-toniou, S. A. Svoronos, B. Koopman and G. Lyberatos, EE Jan./Feb. 92, p38-55.

Modeling Desiccating Behavior of Mine Tailings, Gareth E. Swarbrick and Robin Fell, GT Apr. 92, p540-557.

Modeling Effects of Chemical Explosives for Excavation on Moon, Deborah J. Goodings, Chaun-Ping Lin, Richard D. Dick, William L. Fourney and Leonhard E. Bermold, AS Jan. 92, p44-58.

Modeling Fault Rupture Hazard for the Proposed Reposi-tory at Yucca Mountain, Nevada, K. J. Coppersmith and R. R. Youngs, High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1142-1150. Modeling Horizontally Nail-Laminated Beams, David R. Bohnhoff, ST May 92, p1393-1406.

Bonnioni, S. Hawy S., p. 193-1406.
Modeling Instantaneous Residential Demands in Municipal Water Distribution Systems, Brian D. Barkdoll and Steven G. Buchberger. (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p62-67.

po2-07.
Modeling Irrigation Schedules for Lowland Rice with Stochastic Rainfall, Aflab H. Azhar, V. V. N. Murty and H. N. Phien, IR Jan. Feb. 92, p36-55.
Modeling Monsoon-Affected Rainfall of Pakistan by Point Processes, Thian Yew Gan and Zahoor Ahmad, WR Nov./Dec. 92, p671-688.

Modeling Nearshore Currents in the Vicinity of the Endicott Causeway, Alaska, Peter Hamilton, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p227-239.
Modeling Nutrient Loadings from Croplands in the Chesapeake Bay Watershed, Anthony S. Donigian, Jr. and Avinash S. Patwardshan, (Water Resource-Planning and Management: Saving a Threatened Resource-Insearch of Solutions, Mohammad Karamouz, ed., 1992), p817-822.
Modeling of Lateral Spreads in Silty Sands by Sliding Soil Blocks, Ricardo Dobry and Mohammad H. Baziar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p625-652.
Modeling of Localized Electrochemistry Within Occluded

1992), p625-652.

Modeling of Localized Electrochemistry Within Occluded Regions, Maureen J. Psaila-Dombrowski, Alan Turnbull and Ronald Ballinger, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1687-1694.

Modeling of Toxic Wastewater Treatment by Expanded-Bed Anaerobic GAC Reactors, G. F. Nakhla and M. T. Suidan, EE JulylAug. 92, p495-512.

Modeling Shallow Overland Flow in Surface Irrigation, B. L. Maheshwari and T. A. McMahon, IR Mar/Apr. 92, p201-217.

p201-217.

L. manesnwarı and T. A. McMahon, IR Mar/Apr. 92, p201-217.

Modeling Strength of Sandy Gravel, Richard J. Fragaszy, James Su, Farhat H. Siddiqi and Carlton L. Ho, GT June 92, p920-935.

Modeling the Chaotic Behavior in Simple Shear Granular Flows, Jan-Olov Aidanpää, Hayley H. Shen and Ram Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1031-1034.

Modeling the Pathways of Nonconservative Substances in Estuaries, Tamara M. Wood and António M. Baptista, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p280-291.

Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p357-369.

Modeling Variable Width Buffer Zones with a Geograph-

p357-369.

Modeling Variable Width Buffer Zones with a Geographic Information System, Cary Ostroff, (Water Resources Planning and Management: Saving a Threatened Resource-in Search of Solutions, Mohammad Karamouz, ed., 1992), p213-218.

Modelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, N. Jothi Shankar, H. F. Cheong and C. T. Chan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p666-687.

C. 1. Chan, (estharine and Coastat modeling, Mactom L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p669-683. Modified QUAL2E Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, Rex A. Tohman, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p194-199. Multiple Subregion Allocation Models, Salah Benabdallah and Jeff R. Wright, UP Mar. 92, p24-40. NCASI Experiments Related to Validation of Sediment-Water Column Exchange Models for Hydrophobic Chemicals, Steven W. Hinton and Ray C. Whittemore, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p387-389. Neural Network Modeling of the Mechanical Behavior of Sand, Glenn W. Ellis, Chengwan Yao and Rongda Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p421-424. NIAM Conceptual Data-Base Design in Construction Management, William J. Rasdorf and Osama Y. Abudayyeh, CP Jan. 92, p41-62. Nonlinear Analysis of Strain-Softening Damage under Monotonic and Cyclic Loading, Zdenék P. Bažant, Josko Ožbolt and Rolf Eligehausen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p48-487. Nonlinear Modeling of Truss-Plate Joints, Leslie Groom and Anton Polensek, ST Sept. 92, p2514-2531. Numerical Analysis of Discrete Nonlinear Fracture Mechanics, Walter H. Gerstle and Ming Xie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p784-787.

Numerical and Physical Modeling of Air Diffuser Plume, D. W. Machina, J. A. McCorquodale and J. K. Bewtra, EE Mar./Apr. 92, p253-267. Numerical Study of Soil Anisotropy, A. Anandarajah, EM Jan. 92, p211-216.

Object-Oriented Approaches for Integrated Engineering Design Systems, Richard Sause, Kirk Martini and Gra-ham H. Powell, CP July 92, p248-265.

Object-Oriented Model of Engineering Design Standards, James H. Garrett, Jr. and M. Maher Hakim, CP July 92, p323-347.

72, p3c3-34.
On the Modelling of Damage Due to Volumic Variations in Cementitious Composites, Jacky Mazars and Jean Pierre Bournazel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p482.

Luies, ed. and John M. Niedzwecki, ed., 1992), p482485.
One-Dimensional Model for Analysis of CRC Pavement
Growth, Dapeng Xin, Dan G. Zollinger and Ray W.
James, TE July/Aug. 92, p557-575.
Optimal Aquifer Management for Controlling Land Subsidence, Theodore G. Cleveland and Lu-Chia Chuang.
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p872-877.
Orthometric Heights from Global Positioning System, Jerome Fiedler, SU Aug. 92, p70-79.
Out-of-Plane Seismic Response of Reinforced Masonry
Walls, Martin R. Button and Ronald L. Mayes, ST
Sept. 92, p2495-2513.
An Overview of the Yucca Mountain Global/Regional
Climate Modeling Program, Robert P. Sandoval, Yugal
K. Behl and Starley L. Thompson, (High Level Radioactive
Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p1188-1195.
Physical Modeling of a High Velocity Covered Urban

pp. 168-1195.

Physical Modeling of a High Velocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Jr. and Robert U. Castle, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p618-623.

1992), p618-623.
Pollutant Transport Modelling in Large River Plumes, J. A. Stronach, C. R. Murthy and T. S. Murty, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p759-770.
Positive Drift of a Backward-Bent Duct Barge, Michael E. McCormick and William E. Sheehan, WW Jan./Feb. 92, p106-111.

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojs and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1922, p. 158-163.

Preliminary Circulation Simulations in Apalachicola Bay, T. S. Wu and W. K. Jones, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p344-356.

swanson, ed., 1992), p344-356.

Preliminary Evaluation of Transport Mechanisms for Multiple Substrates in a Laboratory Column System, Zhihuai Xue and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p180-185.

The Present Status of Precipitation Enhancement by Cloud Seeding, Roelof T. Bruintjes, T. L. Clark and W. D. Hall, (Irrigation and Drainage: Eaving a Threatened Resource—In Search of Solutions, Ted Engman, ed., nesource—In S. 1992), p612-617

Primitive-Composite Approach for Structural Data Modeling, H. Craig Howard, Jamal A. Abdalla and D. H. Douglas Phan, CP Jan. 92, p19-40.

Principles of Control for Robotic Excavation, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1401-1412.

Russell J. Miller, ed., 1992), pl 401-1412. Proposed Development of South Central Florida Hydro-logic Ecosystem Model, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p707-711. Reliability Model for Soil Liner: Post Construction, I. Bo-gardi, W. E. Kelly and A. Bardossy, GT Oct. 90, p1502-1520.

Removal of 1,2 Dibromo-3-Chloropropane by Counter-current Cascade Air Stripping, N. Nirmalakhandan, Won Jang and Richard E. Speece, EE Mar/Apr. 92, p226-237.

ryou raing and ruchard E. Speece, EE Mar/Apr. 92, p226-237.

Reservoir Management and Thermal Power Generation, Barbara J. Lence, M. Imran Latheef and Donald H. Burn, WR July/Aug. 92, p388-405.

Reservoir Water Quality Modeling in Northern Portugal—Some Case Studies, A. C. Rodrigues and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In. Search of Solutions, Mohammad Karamouz, ed., 1992), p804-809.

Response of Model Pile Groups to Strong Shaking, W. D. Liam Finn and W. Blair Gohl, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p27-55.

Routes to Chaos of a Vertically Rotating Pendulum, S. Yip and F. DiMaggio, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p672-675.

Routing of Heterogeneous Sediments over Movable Bad-

Yip and F. DiMaggio, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p672-675.

Routing of Heterogeneous Sediments over Movable Bed: Model Development, Andre van Niekerk, Koen R. Vogel, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p246-262.

Saturation Flow and Capacity of Shared Permissive Left-Turn Lane, Feng-Bor Lin, TE Sept./Oct. 92, p611-630.

Seismic Wave Propagation by Finite Differences on the Connection Machine, Jacek Myczkowski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p115-118.

A Shell Approach to Modeling Oil Spill Trajectory and Fate and Search and Rescue Operations, M. L. Spaulding, E. Howlett, K. Jayko, E. Anderson and T. Isaji, (Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p157-174.

Simple Double-Hardening Model for Geomaterials, Sunirmal Baneriee, Robert O. Davis and Kandiah Sribalaskandarjah, GT June 92, p889-901.

Simple Rigid Plastic Model for Seismic Tilting of Rigid Walls, Raj Siddharthan, Samia Ara and Gary M. Norris, ST Feb. 92, p469-487.

Simulatide Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p177-182.

Simulating THM Formation Potential in Sacramento Delta: Part I, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p513-529.

A Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wight, ed., 1992), p251-539.

Solid Modeling of RC Beams: 1. Data Structures and Algorithms, M. A. Austin and J. L. Preston, CP Oct. 92,

Solid Modeling of RC Beams: 1. Data Structures and Algorithms, M. A. Austin and J. L. Preston, CP Oct. 92, p389-403.

Solid Modeling of RC Beams: 2. Computational Environ-ment, J. L. Preston and M. A. Austin, CP Oct. 92.

ps04-416.
Space Habitat Contaminant Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 370-1378.

Russell J. Miller, ed., 1992, p.1370-1378.
Spatial Decision Support System for Toxic Spill Modeling in the Ohio River, Walter M. Grayman, Jason P. Heath and Richard M. Males, (Water Resource-Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p74-78.

Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warner, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-779.

Stepwise Disaggregation Scheme for Synthetic Hydrology, Emidio G. Santos and Jose D. Salas, HY May 92, gy, Emidie p765-784.

Streamflow Forecasting Using Trainable Neural Net-works, Jason Smith and Robert N. Eli, (Water Resourc-es Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p56-61

A Study of Salt Transport Processes in Delaware Bay, Roy A. Walters, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p240-251.

Summary of Roundtable Discussion on Modeling Issues. Paul E. Benson, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278.

Surface Motion Due to Stochastic Plane Sources in a Layered Medium, Y. Yong and J. Yu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p184-187.

Systems Analysis in Ground-Water Planning and Man-agement, William W. G. Yeb, WR May/June 92. p224-237

p224-237.
Taylor-Galerkin Method for Wind Wave Propagation, H. S. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p87-90.
Tests on the Application of CAN-Q to Construction Process Modeling, Amarit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p199-206.

Thermodynamic Model of Nitrification Kinetics, Thongchai Yantarasri, Albert Garcia, III. and David Brune, EE July/Aug. 92, p568-584.

Brune, EE July/Aug. 92, p508-584.
Tide and Hurricane Storm Surge Computations for the
Western North Atlantic and Gulf of Mexico, Joannes J.
Westerink, Julia C. Muccino and Richard A. Luettich,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p538-550.

Tide- and Wind-Driven Flushing of Boston Harbor, Massachusetts, Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p594-606.

Swanson, ed., 1992), p394-006.

Traffic Impact Study for a Regional Shopping Center at a
Basque City. A European View, Mikel Murga, (Site
Impact Traffic Assessment: Problems and Solutions,
Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C.
Sutaria, ed., 1992), p84-88.

Trends in Phreatic Surface Motion in Rubble-Mound
Breakwaters, Kevin R. Hall, WW Mar/Apr. 91, p179-

Tuned Liquid Damper (TLD) for Suppressing Horizontal Motion of Structures, Yozo Fujino, Limin Sun, Benito M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p2017-2030.

Underground Refrigeration Outlets, Clay Waseen, (Ports '92, David Torseth, ed., 1992), p682-694.
Unified Pavement Distress Index for Managing Flexible Pavements, C. H. Juang and S. N. Amirkhanian, TE Sept./Oct. 92, p686-699.

Vertical Sediment Distribution, Jin Ren Ni and Guang Qian Wang, HY Sept. 91, p1184-1194.

Water Quality Management Planning—Bird River Watershed, Alan Cavacas, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101.

ed. and Nani C. Bnowmik, ed., 1992), p96-101.
Water Quality Modelling: Prediction of the Transport of
Water Constituents in the Weser Estuary (Germany),
Agmar Müller, Iris Grabemann and Bernhard Kunze,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Water Resource Systems Models: Their Role in Planning, Daniel P. Loucks, WR May/June 92, p214-223.

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, 0-87262-876-0, 920pp.

Wave Propagation in Fluid Loaded Periodic Structures, Michael L. Accorsi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p212-

### Models

AAES Model Anticipates Degree Production, CE Oct. 92, p68,70.

Accounting for Uncertainty in Natural Systems, Milton E. Harr, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1612-1616.

Aeration at Ohio River Basin Navigation Dams, Steven F. Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens and George H. Taylor, EE Mar./Apr. 90, p361-375.

p361-375.
Alternative Airfield Pavement Quality Control, Raymond P. Rawe and Terry A. Ruhl, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p109-123.
Alternative Methods of Drainage Management in San Joaquin Valley, California, S. Alireza Taghavi and Ben Everett, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337.
Analytical Moment-Curyature Relations for Tied Con-

Analytical Moment-Curvature Relations for Tied Concrete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544.

Feb. 92, p529-544.
Application of Extremely Low Altitude Photogrammetry for Monitoring Coastal Structures, Richard B. Davis and Thomas R. Kendall, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), p892-897.
The Application of UNET to a Complex Channel Network, Marc C. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1148-1153.

1992, p1148-1153.
An Approach for Incorporating Inflows Uncertainty in Management Models, Luis Vives, Jesús Carrera and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 24.90.

Appropriate Use of Deep-Bed Filtration Models, C. S. P. Ojha and N. J. D. Graham, EE Nov/Dec. 92, p964-

980.

Availability of Shear Strength Reduction Technique, Tamotsu Matsui and Ka-Ching San, (Stability and Pefformance of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), P445-460. Batter Piles and the Seismic Performance of Pile-Supported Wharves, W. H. Roth, H. Fong and C. de Rubertis, (Ports '92, David Torseth, ed., 1992), p336-

349.

Bootstrapping Models Using Existing Databases and Object Orientation, Rene F. Reitsma and David Sieh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p598-605.

Borosilicate Glass (e.n.) Sources Used With Origen-Type Calculations, O.W. Hermann and R. Salmon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1272-1280.

Can the Kristallin-J. Near-Field Model be Considered Ro-

17721, p1272-1280.
Can the Kristallin-I Near-Field Model be Considered Robust? I. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1770-1776.

1992), p1/70-17/6.

Coastal Geomorphology and Sand Budgets Applied to Beach Nourishment, Timothy W. Kana and F. David Stevens, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p29-44.

Comparison of Micromechanical Models for Elastic Properties, Cliff J. Lissenden and Carl T. Herakovich, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1309-1322.

III, wiily L. Saden, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 309-1322.
Comparison of Two Conceptual Models of Flow Using the TSA, Michael L. Wilson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p882-890.
Comparison of Wind Cross-Spectral Data with Models, N. P. Jones, A. Jain and R. H. Scanlan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p288-291.
Computer Codes for Modeling Multi-Phase Flow and Transport in the Subsurface, Paul K. M. van der Heijde, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p31.
Cone Models for Honogeneous Soil. I, Jethro W. Meek and John P. Wolf, GT May 92, p667-685.
Cone Models for Soil Layer on Rigid Rock. II, Jethro W. Meek and John P. Wolf, GT May 92, p686-703.
Crack Band Based Model for FEM Analysis of Concrete Structures, Grzegorz Gajer and Peter F. Dux, ST June 90, p1696-1714.

Citical Evaluation of Thickening Theories, Athanasios Papanicolaou and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p735-740.

Decision Analysis Model for Well Rehabilitation and Groundwater Development, Moses Lake, Washington, R. H. Anderson, W. J. Roberds and D. Banton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p537-542.

Delta Method for Estimating Primary Production, Respi-

Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

Derivation of Infiltration Equation Using Systems Approach, V. P. Singh and F. X. Yu, IR Nov./Dec. 90,

proach, V p837-858.

positions of Threshold Channel, Gregorio Vigilar, Jr. and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p729-

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1972-1985. p1972-1984.

esign of Wave Barriers for Reduction of Horizontal Ground Vibration, Tahmeed M. Al-Hussaini and Shahid Ahmad, GT Apr. 91, p616-636.

Shahid Ahmad, GT Apr. 91, p616-636.

A Design Product Model for Computer Integrated Structural Engineering, Jerome Madden and Richard Sause, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p113-120.

Developing Conceptual Models for Performance Assessment of Waste Management Sites, Felicia A. Kerl, A. Sharif Heger and David P. Gallegos, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p502-509. p502-509.

Robert D. Carl, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p667-

07/2.
Development of the San Fernando Basin Groundwater Flow Model, Shih-Huang Chieh, Kelli A. Shuter and Melih M. Ozbilgin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p248-233.

ugdale Model Applied to Crack Interactions, K. Shah, H. Stolarski and J. F. Labuz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p498-501.

Dynamic Elastic-Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. 92, p2005-2016.

Dynamic Response of Multigirder Bridges, Ton-Lo Wang, Dongzhou Huang and Mohsen Shahawy, ST Aug. 92, p2222-2238.

Eccentrically Loaded Plates on Reinforced Subgrades, Vito A. Guido and John J. Nocera, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1116-

Economics of Ocean Thermal Energy Conversion (OTEC), Luis A. Vega, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p152-

Effect of Active Control to Structural Reliability, J. T. P. Yao and H. G. Natke, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p373-376.

1992), p373-376.
An Elastoviscoplastic Model for High Strength Concrete, Tianxi Tang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p856-859.
Erosion of Steep River Banks and Time Evolution Towards Equilibrium Channel Shape, Agnes Kovacs and Gary Parker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p896-899.
Evaluating Damage Detection in Bridges, David F. Mazurek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p944-947.

Evaluation of Modelling Parameters for Simulation of Estuarial Systems, Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p707-719.

Evaluation of Seismic Soil Response Using Stochastic Linearization, Jeen-Shang Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. Lin, ed., 1992), p356-539.

Experimental and Theoretical Study of Flexural Behavior of Polymer Fiber Reinforced, Cement-Treated Soils, Robert Liang, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1080-1091.

Experimental Study of Secondary Systems in Baselsolated Structure, G. Juhn, G. D. Manolis, M. C. Constantinou and A. M. Reinhorn, ST Aug. 92, p2204-2221.

2221.

Experiments with a Terrain-Following Hydrodynamic Model for Cobscook Bay in the Gulf of Maine, David A. Brooks and Laurice U. Churchill, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p215-226.

Experiments with Wind Effects on Pavement Runoff, Joseph R. Reed, David F. Kibler and George Krallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Bennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.

A Facility Programming Product Model, Gregory M. Per-

G. BIOWHILE, Cu., 1992), p931-933.

A Facility Programming Product Model, Gregory M. Perkinson, Francois Grobler and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information System Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p41-48.

Factor, Influencing Paging Pulport, Registrans, Local III.

R. Wright, ed., 1992), p41-48.

Factors Influencing Passive Pullout Resistance, Joon-lk Sohn, Soo-Il Kim, Young-Jin Kim and Dong-Deok Yoon, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1153-1162.

Fatime, Palishility Model for Pailure, Paider A. Fatime, Palishility Model for Pailure, Paider A.

Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p320-323.

Fiber Suppressed Localization in Tension, B. Mobasher and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-

Stributes, ed. and John M. Nietuwecki, ed., 1972, peop871.
Finite Element Analysis and Design of Bridges in a Distributed Computing Environment, C. A. Hudson and
M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p671-678.
Finite Element Analysis of a Geogrid Reinforced Soil
Wall, Richard J. Bathurst, Rajagopal Karpurapu and
Peter M. Jarrett, Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O. Holtz,
ed. and Ilan Juran, ed., 1992, p1213-1224.
First-Order Model for Durability of Hanford Waste
Glasses as Function of Composition, Pavel R. Hrma,
Gregory F. Piepel, Michael J. Schweiger and Donald E.
Smith, High Level Radioactive Waste Management Program
Committee, 1992), p1236-1243.
Flow in a Model Symmetric Bifurcation, B. B. Lieber, Y.

Flow in a Model Symmetric Bifurcation, B. B. Lieber, Y. Zhao and J. H. Citriniti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p840-843.

1992), p840-843.
Fluid Dynamics at the Carotid Bifurcation, A. S. Anayiotos, D. P. Giddens, S. A. Jones, S. Glagov and C. K. Zarins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-847.
FM—An Educated, Integrated Approach, Sine Hill, Cynthia Hallman and Richard Berner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p33-40.

 1992), p33-40.
 Fully Coupled Unsteady Mobile Boundary Flow Model (FCM), Luís R.P. Correia, Bommanna G. Krishnappan and Walter H. Graf, HY Mar. 92, p476-494.
 Furrow Geometric Parameters, Thomas J. Trout, IR Sept./Oct. 91, p613-634.
 Geochemical Model for <sup>1</sup>4C Transport in Unsaturated Rock, Richard B. Codell and William M. Murphy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee. 1992b. p1955-1955. mittee, 1992), p1959-1965.

A GIS Based Synthetic Watershed Sediment Routing Model, Roger H. Smith, Surya N. Sahoo and Larry W. Moore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p200-207.

Graphical Models for Simulation and Control of Robotic Systems for Waste Handling, William D. Drotning and Phil C. Bennett, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p974-979.

Hydraulic Controls on Delaware Estuary Water Quality, Joseph L. Dil.Orenzo, Georgia R. Marino, Poshu Huang, Tavit O. Najarian and M. Llewellyn Thatcher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p151-157.

Hydraulic Geometry of Threshold Channels, Panayiotis Diplas and Gregorio Vigilar, HY Apr. 92, p597-614.

Hydrological Aspects of Droughts, A. R. Rao and A. Al-Wagdani, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p334-340.

Hypoplastic Model for Sands, J. P. Bardet, EM Sept. 90, p1973-1994.

Identification of Control System for Canal with Night Storage. Wytze Schuurmans. Bobet Brewney Line (1992), p354-364.

hypopussic Model for Sands, J. P. Bardet, EM Sept. 90, p1973-1994.

Identification of Control System for Canal with Night Storage, Wytze Schuurmans, Robert Brouwer and Peter Wonink, IR May/June 92, p360-369.

Impact of Breakwater Removal on Hydrodynamics and Water Quality in Flushing Bay, New York, Frederick E. Schuepfer, Guy A. Apicella and Les Kloman, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p694-706.

Indicator Variography for Spatial Characterization of Aquifer Heterogeneities, M. V. Cromer and R. M. Srivastava, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p420-425.

Integrated Physical Model for Cylindrical Shells, Demetres Briassoulis, ST Aug. 92, p2168-2185.

INTERLUNE Concept for Helium-3 Fusion Development, Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p804-814.

814.
Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Farrag and Victor Elias, GT Jan. 90, p54-72.
Laboratory Model Study on Geosynthetic Reinforced Soil Retaining Walls, I. Juran and B. Christopher, GT July 89, p905-926.
Laupahoehoe Harbor Planning, Design, & Construction, David A. Lau, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, p520-336.
Level of Significance Selection in Engineering Analysis, Kaye L. Brubaker and Richard H. McCuen, El Oct. 90, p375-387.
Live Load Models Based on WIM Data Andreas S.

ive Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nassif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.
Longshore-Transport Model for South Indian and Sri Lankan Coasts, P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-424.
Los Angeles-Long Beach Harbors Model Enhancement Program, William C. Seabergh, S. Rao Vemulakonda and James Rosati, III., (Ports '92, David Torseth, ed., 1992), p848-487.
Lumpod Parameter Model for the Dynamics of the Pulmonary Circulation, B. B. Lieber, Z. Li and B. J. B. Grant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p848-851.
Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p163-183.
Mass Transfer of Volatile Contaminants in Showers, John C. Little, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-165. Identifying Urban and Suburban Roadways with Critical Large Truck Accident Rates, J. D. Brogan and J. W. Cashwell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p432-436.

Micromechanics Based Design for Pseudo Strain-Hardening in Cementitious Composites, Victor C. Li and H. C. Wu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p740-

Model and Calculations for Net Infiltration, Stuart W. Childs and Austin Long, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1633-1642.

Model for Biological Reactors Having Suspended and At-tached Growths, Chi-Yuan Lee, EE Nov/Dec. 92,

Model for Optimal Design of Reinforced Concrete Beam, B. K. Chakrabarty, ST Nov. 92, p3238-3242.

Model Sensitivity Analysis in Near-Field Performance Assessment, N. C. Garisto and D. M. LeNeveu, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2284-2289.

1992), p2.264-2289.

A Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, M. L. Spaulding, K. Jayko, T. Isaji, E. L. Anderson, E. Howlett, J. C. Swanson, D. Mendelsohn and S. Puckett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175.

and Nani U. Brownia, ed., 1992, p. 10-17.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Modeling DO Conditions in Streams with Dispersion, Antonis D. Koussis, Prashant Kokitkar and Adosh Mehta, EE May/June 90, p601-614.

Mehta, EE May/June 90, p601-614.
Modeling Flow and Flood-Plain Storage in a Tidally Affected River, A. G. Strickland and Jerad D. Bales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1130-1135.
Modeling the Salinity "History" of Great Egg Harbor Bay, New Jersey, Bryan Pearce, Howard McIlvaine, Ed Simek, Pete Sucsy and Vibhu Vivek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p939-964.
Modeling the Stiffness of Pile Group Foundations.

Modeling the Stiffness of Pile Group Foundations, Toorak Zokaie and Karl M. Romstad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p810-817.

Modeling the Effect of Atmospheric Emissions on Groundwater Composition, Theresa J. Brown, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2318-2322.

Models for Calculating Radionuclide Release from the Near Field, L. Romero, L. Nilson, L. Moreno and I. Neretnieks, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p954-959.

Modified Vlasov Model for Beams on Elastic Founda-tions, C. V. Girija Vallabhan and Y. C. Das, GT June tions, C. V. C 91, p956-966.

Momentum Model of Flow Past Weir, Amruthur S. Ramamurthy, Ngoc-Diep Vo and German Vera, IR Nov/Dec. 92, p988-994.

A Multiple Presence Load Model for Bridges, Robert J. Heywood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p579-

Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p292-295.

Nonlinear Cyclic Behavior of Reinforcing Bars Including Buckling, Giorgio Monti and Camillo Nuti, ST Dec. 92, p3268-3284.

Nonlinear Finite-Element Model for Light-Frame Stud Walls, B. Kasal and R. J. Leichti, ST Nov. 92, p3122-

Nonlinear Shoaling and Impact of Waves on Coastal Structures, S. T. Grilli, M. A. Losada, F. Martin and I. A. Svendsen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82.

Nonlinear Soil-Pile Interaction Model for Dynamic Lat-eral Motion, Toyoaki Nogami, Jun Otani, Kazuo Konagai and Hsiao-Lian Chen, GT Jan. 92, p89-106.

A Numerical Model Simulation of Tidal Currents in Long Island and Block Island Sounds, L. Charles Sun, (Estu-arine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p513-524.

Observations on Flow Around Bridge Piers, Ferdous Ahmed and Nallamuthu Rajaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p834-839.

On Distributed Processing Applications in Finite Element Analysis, Edward J. Plaskacz, Martin R. Ramirez and Sanjeev Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p107-

On the Response of Earth Dams Subjected to Earthquake Fault Rupture, Jonathan D. Bray, Raymond B. Seed and H. Bolton Seed, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p608-624.

On the Role of Experimental Mechanics in Assessing the Performance of Concrete, Stuart E. Swartz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p119-122.

On-Line Optimal Control of Urban Water Supply, Otto J. Helweg, Shahram Pezeshk and Kenneth E. Oliver, (Water Resources Planning and Management Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p532-536.

An Operational Evaluation Process for Long-Duration Mission Habitats in Space, M. Novara, E. Raffner and D. Antonelli, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Optimization of Real-Time Hydrothermal System Opera-tion, William W.-G. Yeh, Leonard Becker, Shi-Qian Hua, De-Pu Wen and Jian-Min Liu, WR Nov /Dec. 92, p636-653.

Parameter Estimations of Structural Dynamic Systems, C.-B. Yun, C.-G. Lee and H.-J. Lee, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p212-215.

Performance Assessment for a High-Level Waste Reposi-tory at Yucca Mountain, R. Shaw, R. F. Williams, J. C. Stepp and R. McGuire, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p869-873.

Physical Model Testing of Broken Armor Stone, Donald L. Ward, (Durability of Stone for Rubble Mound Break-waters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p34-39.

Plates on Elastic Foundation, David S. Chilton and Jerzy W. Wekezer, ST Nov. 90, p3236-3241.

Preclosure Seismic Hazards and Their Impact on Site Suitability of Yucca Mountain, Nevada, J. Duane Gibson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1151-1158.

Predicting Construction Contractor Failure prior to Con-tract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Predicting the Performance Limits of Soil-Culvert Systems, Vahia E. -A. Mohamedzein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911.

ed., 1992), 990-911.

A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2,4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, P. S. Ho and W. F. McTerman, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p364-369.

Prescriptive Model for Missouri River Reservoir-operation Analysis, David T. Ford, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p555-560.

A Probabilistic Regional Damage Estimation Model for Earthquake Occurrences, Dimitris Rentzis, Anne S. Kiremidjian and Craig Howard, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24.
Probability Model of Load Exceedances under Cyclic Loadings, Karen C. Chou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p208-211.
Probability of Bridge Failure Due to Pier Scour, P. A.

13921, p208-211.
Probability of Bridge Failure Due to Pier Scour, P. A. Johnson and B. M. Ayyub, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), ps90-695.

Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

1992), p164-169.

Reliability Analysis of Plates with Initial Deflection by Entropy Model, Miyamura Atsunori, Kohama Yoshiro and Takada Toyofumi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-562.

Structural and veotechnical Reliability, Y. K. Lin, ed., 1992), p559-562.

Reliability Consideration in Shakedown Analysis, K. C. Chou and T. V. Galambos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p204-207.

Reliability Model for Bridge Columns under Seismic Loads, Michel Ghosn and Ge Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p168-171.

Revised Cam-Clay Model, B. R. Srinivasa Murthy, A. Vatsala and T. S. Nagaraj, GT June 91, p851-871.

Risk Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, M. A. Cassaro, M. J. Cassaro, R. K. Ragade and S. Alexander, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p29-42.

Risk Consistent Estimate of Heat-Straightening Applications. I: Plates, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409.

Risk Consistent Estimate of Heat-Straightening Applications.

R. RICHARD AVERI, ST DEC. 92, p3394-3409.
Risk Consistent Estimate of Heat-Straightening Applications. II: Beams, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426.
The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1429-1436.
SCS Water Surface Profite Model—WSP2

SCS Water Surface Profile Model—WSP2, William H. Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p859-864.

Bhowmik, ed., 1992), p859-864.
SEI In-Space Operations and Support Challenges, Ronald Caldwell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1476-1487.
Sensitivity of Lifeline Response to Models for the Spatial Incoherence of the Seismic Ground Motions, Aspasia Zerva, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p560-563.
Sensitivity of Non-Point Source Pollution Controls to Land Use, Oner Yucel and David W. Blaha, (Environmental Engineering, Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p358-363.

1972), p336-303.

Shoaling and Breaking of Random Wave Trains: Spectral Approaches, James T. Kirby, James M. Kaihatu and Hajime Mase, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p71-

74.
Short Beach Nourishment Fill Performance on an Irregular Coatline, Douglas W. Mann, Lamont W. Curtis and Thomas H. Daniel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119.
Similarity Solutions of Starting Jets and Starting Plumes, Vincent H. Chu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p600-

603

603. Simulation of Two Approaches to Curb Potential Buildup of Nitrates in Groundwater, D. Adelman, S. Zheng and M. F. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p611-616.

Soil Nailing: A Simplified Kinematic Analysis, R. John Byrne, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p73-1-764.
Soild Waste Travel Demand Model Using GIS and Simulation for Evaluating Site Impacts, Erin K. Bashaw and P. A. Koushki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p185-189.
Some Remarks on BK-Models for Fatigue Crack Growth, M. M. Rocha and G. I. SchuEller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1316-319.
Source-Term Calculations for a Total Systems Analysis, David W. Engel, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1738-1764.

Program Committee, 1992), p1758-1764.

Specifying the Offshore Environment, George Z. Forristall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1-41.

Stability of Accropode(R) and Comparison with Parallelepipedic Block, Braulio G. Madrigal and José Lozano, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p704-717.

State of the Art in Open-Cycle Ocean Thermal Energy Conversion, Michel Gauthier, Jean Marvaldi and Federica Zangrando, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p109-151.

Statistical Evaluation of Mechanistic Water-Quality Models, Kenneth H. Reckhow, J. Trevor Clements and Randall C. Dodd, EE Mar/Apr. 90, p250-268.

Randali C. Dodd, EE Mar./Apr. 90, p250-268.
Steady-State and Multiple Cracking of Short Random Fiber Composites, Victor C. Li and Christopher K. Y. Leung, EM Nov. 92, p2246-2264.
Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p539-542.
Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.
Strain-Based Damase Deactivation in Concrete. N. P.

Strain-Based Damage Deactivation in Concrete, N. R. Hansen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p486-489.

Strength and Ductility of Confined Concrete, Murat Saatcioglu and Salim R. Razvi, ST June 92, p1590-1607

1007.
Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.
Study of Time-Dependent Local Scour Around Bridge Piers, A. Melih Yanmaz and H. Doğan Altınbilek, HY Oct. 91, p1247-1268.
Supporting Hydration, Calculations for Small to Local

Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, J. B. Case, J. A-Fernandez and J. R. Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2298-2305.

Management Program Committee, 1992), p2298-2305.

A Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinipour and Vincent M. Gorokhowski, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p186-191.

Soptimental Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Task Committee Report on Metalla Maria Hudelland

Sept. 90, p.3.3-340.
Task Committee Report on Urban Hydrology Chapter, David F. Kibler, A. Osman Akan, Christopher B. Burke, Mark W. Gilden, Gert Aron, Richard H. McCuen and Andrew J. Reese, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 10021-273-273

Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p725-728.

Thermal Stratification Modeling of Lakes with Sediment Heat Flux, Ting-Kuei Tsay, Gordon J. Ruggaber, Steven W. Effler and Charles T. Driscoll, HY Mar. 92,

Steven W. Effler and Charles T. Driscoll, HY Mar. 92, p407-419.
Tidal Model Using Method of Characteristics, Panayis-Fokion C. Matsoukis, WW May/June 92, p233-248.
Traffic Impact Study Ingredients, Peter A. Terry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p217-222.

The Transverse Vortex in the Wall Regions of the Turbulent Boundary Layers in the Flows with Adverse Pressure Gradient, Q. X. Lian and T. C. Su, (Engineering Mechanics, Loren D. Lutes, ed., and John M. Niedzwecki, ed., 1992), p474-477.

Trash Rack Blockage in Supercritical Flow, Steven R. Abt, Thomas E. Brisbane, David M. Frick and Charles A. McKnight, HY Dec. 92, p1692-1696.

Treatability Study of Granular and Biological Activated Carbon for Groundwater Containing Fenac, a Herbicide, Chen-yu Yen and Rong-lin Leu, (Environment) Engineering. Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p104-109.

or somatons, F. Fetete Lineweaver, ed., 1992s, policiations, T. J. Ross, J. P. Morrow, L. R. Wagner and G. F. Luger, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p535-542.

A Two-Stage Safety Assessment Methodology for Construction Activities, M. H. M. Hassan and B. M. Ayyub, (Probabilistic Mechanics and Structural and Gotechnical Reliability, Y. K. Lin, ed., 1992), p515-518.

Uplift Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaly, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

Use of Wingz Spreadsheet as an Interface to Total-System Performance Assessment, W. F. Chambers and A. H. Treadway, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493.

Using Simple Models to Evaluate Complex Storm Effects, Paul L. Freedman and John K. Marr, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-89.

Validation of Safety Assessment Models as a Process of Scientific and Public Confidence Building, Shlomo P. Neuman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1404-1413.

Water Management as an Instrument for Cooperation and Reconciliation, Charles G. Gunnerson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p724-729.

Karamouz, ed., 1992), p724-729.
Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.
Water-Balance Model of Two Conservancies in Guyana, J. de Beer and L. Bacchus, IR July/Aug. 92, p513-519.
Water-Balance Model for Recourser Management Decision.

Watershed Models for Resources Management Decisions, Alan M. Lumb, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p884-

Modular structures

Advances in Ground Operations for the Next Generation
Space Launch Vehicle Programs, Mark Moeller and
Shelly Ewing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p1557-1566.
An Analysis of an Inflatable Module for Planetary Surfaces, Paul S. Nowak, Willy Z. Sadeh and Marvin E. Criswell, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p78-88.
Conceptual Design of Modules for a Lunar Base, Edward
R. Haninger and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed., Stein Sture. ed. and Russell J. Miller, ed., 1992),
p100-111. p100-111.

p100-111.
Concrete Modules Lead to Instant High-Rise Housing, CE Mar. 92, p10.
CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.
Design and Technology Assessment of Three Lunar Habitat Concepts, Warren D. Hypes, Robert L. Wright and Marston J. Gould, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p249-259.

Evolution of the Space Station Freedom Module Pattern, Marston Gould, James Hendershot and Rudy Saucillo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p575-986. Field Monitoring of a Modular Detached Breakwater System, Robert M. Sorensen and J. Richard Weggel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p189-204.

The Future Role of Factory Built Housing, Fred C. Hallahan, Jr., (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p29-38.

Genesis: The Creation of a Lunar Base, Paul Bialla, Nathan Nottke and Seishi Suzuki, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p13-

A Methodology for Development of Spaced-Based Assembly Operations, Scott Peppin, Jeff Morrow and Joel Loudenslager, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1035-1047.

Modular Robot Testbed, Chris Grasso, Wayne Jermstad, Mike Mathews, Jane Pavlich and Jim Avery, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453.

Miller, ed., 1992), p1443-1433.

Phased Assembly of a European Space Station, David A. Nixon and Robin C. Huttenbach, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p850-861.

A Removable Submarine Cover for Drydock No. 2 Modernization, Ted Bobroski and Joseph J. Bonasia, (Ports '92, David Torseth, ed., 1992), p506-519.

Modalus of clasticity
Laboratory versus Nondestructive Testing for Pavement
Design, William N. Houston, Michael S. Mamlouk and
Rohan W. S. Perera, TE Mar./Apr. 92, p207-222.
Ripid-Pavement Evaluation Using NDT—Case Study,
Jacob Uzan, TE July/Aug. 92, p527-539.
Variations in Measured Resilient Modulus of Asphalt
Mixes, Fasial H. Al-Sugair and Jamal A. Almudaiheem,
MT Nov. 92, p343-352.

## Mohr-Coulomb theory

An Evaluation Study of Modified Mohr-Coulomb and Cap Models, Hamdan N. Al-Ghamedy and Sahel N. Abduljauwad, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p717-

Failure Criteria Interpretation Based on Mohr-Coulomb Friction, D. V. Griffiths, GT June 90, p986-999.

### Moisture content

Creep Behavior Model for Structural Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Aug. 92, p2261-2277.

92, p.2201-2217.
Diffusion of Carbon Dioxide and Iodine Through Yucca Mountain Tuffs—Effects of Temperature and Moisture Content, Tevfik Bardakci, Franklin G. King and Ajeet Singh, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1946-1952.

Drying and Cracking Effects in Box-Girder Bridge Seg-ment, Zdeněk P. Bažant, Vladimír KHstek and Jan L. Vítek, ST Jan. 92, p305-321.

Vitek, ST Jan. 92, p305-521. Effects of Soil Moisture and Physical-Chemical Properties of Organic Pollutants on Vapor Phase Transport in the Vadose Zone, Say Kee Ong, Thereas B. Culver, Leonard W. Lion and Christine A. Shoemaker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179. Hygrothermal Effects on Load-Duration Behavior of Structural Lumber, Kenneth J. Fridley, R. C. Tang, Lawrence A. Soltis and Chai H. Yoo, ST Apr. 92, p1023-1038.

Hygrothermal Effects on Mechanical Properties of Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Feb. 92, p567-581.

The Influence of Moisture on Air Oxidation of UO<sub>2</sub>: Cal-culations and Observations, Peter Taylor, Robert J. Lemire and Donald D. Wood, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1442-1448.

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, Richard S. Haupt and Dale C. Bull, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Jamoo, ed. and Robert A. Eaton, ed., 1992), p125-137.

Moisture Content and Reliability-Based Design for Wood Members, David V. Rosowsky and Kenneth J. Fridley, ST Dec. 92, p3466-3472.

Moisture Effects on Flexural Performance of Wood Fiber-Cement Composites, Parviz Soroushian and Shashidhara Marikunte, MT Aug. 92, p275-291.

Pavement Subdrainase Instrumentation in Indiana: A

Pavement Subdrainage Instrumentation in Indiana: A Case Study, T. D. White and Zubair Ahmed, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p415-425.

p413-423.
Seasonal Monitoring of Pavements—A Whole Lot More, Cheryl Allen Richter, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p182-195.
Softening of Fill Slopes Due to Moisture Infiltration, Robert W. Day and Gregory W. Axten, GT Sept. 90,

p1424-1427.

p1424-1427.

Synchrotron Radiation Measurements of Degree of Saturation in Porous Matrix, Scott A. Wells and Richard I. Dick, EM Aug. 92, p1738-1744.

A System for Measuring Moisture Transients in Clay-Based Barrier Materials, A. W. L. Wan, B. H. Kjartanson, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1122-1128.

Walking of Entwork on Erransives Soils, Robert W. Day, Walking of Entwork on Erransives Soils, Robert W. Day.

mittee, 1992), p1122-1128.

Walking of Flatwork on Expansive Soils, Robert W. Day, CF Feb. 92, p52-57.

X-Ray and Visible Light Transmission as Two-Dimensional, Full-Field Moisture-Sensing Techniques: A Preliminary Comparison, V. C. Tidwell and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1099-1110.

Moisture density relations Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov./Dec. 92, p848-864.

Moisture uptake
Coupled Heat and Moisture Transport Model for Underground Climate Prediction, G. Danko and P. Moussel-Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p790-798.

Committee, 1992, p.790-792.

Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, C. S. Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p263-271.

A laboratory Investigation on Long Term Performance.

gram Committee, 1992, p.203-271.
A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Additives, W. Virgil Ping and Thomas W. Kennedy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p.206-215.

Moment distribution
Prevention of Stress Relaxation in Viscoelastic Struc-tures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

Yield Safety, Cracking Control, and Moment Redistribu-tion, M. Z. Cohn and Paolo Riva, ST Feb. 92, p447-

Cyclic Behavior of End-Plate Moment Connections, Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2917-2930.

Deflections of Beams with Varying Rectangular Cross Section, Filippo Romano and Gaetano Zingone, EM Oct. 92, p2128-2134.

Fixed-End Moments and Thrusts of Planar Curved Beams, Tung-Ming Wang and Theodore F. Merrill, ST Jan. 92, p324-331.

Live-Load Moments for Continuous Skew Bridges, Mohammad A. Khaleel and Rafik Y. Itani, ST Sept. 90,

Point-Estimate Method for Calculating Statistical Moments, K. S. Li, EM July 92, p1506-1511.

Residual Deformation Analysis for Inelastic Bridge Rat-ing, Burl E. Dishongh and Theodore V. Galambos, ST June 92, p1494-1508.

Simple Cord Composites, Anthony J. Paris, Ching-Chang Lin and George A. Costello, EM Sept. 92, p1939-1948.

Momentum Model of Flow Past Weir, Amruthur S. Ramamurthy, Ngoc-Diep Vo and German Vera, IR. Nov./Dec. 92, p988-994.

Monitoring
Addressing Bridge Scour When Funding Falls Short, John
N. Paine, Robert J. Leedy, Jr. and James N. Wigfield,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p204-209.

Aircraft Noise Monitoring at Denver International Air-port, Andrew S. Harris, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed.,

1992), p41-48.

Analysis of Dredged Material Deposition Patterns, Eric E. Nelson and Billy H. Johnson, (*Ports* '92, David Tor-seth, ed., 1992), p470-479.

E. Nelson and Billy H. Johnson, (Ports '92, David Torseth, ed., 1992), p470-479.
Application of Extremely Low Altitude Photogrammetry for Monitoring Coastal Structures, Richard B. Davis and Thomas R. Kendall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p892-897.
The Behavior of Reinforced Soil Walls Constructed by Different Techniques, A. McGown, K. H. Loke and R. T. Murray, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Illan Juran, ed., 1992), p1237-1248.
Case History: TRE At a Refinery/Chemical Plant, Carol L. La Breche and Russell S. Dykes, (Environmental Engineering: Saving at Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p555-560.
Case Study: Design of Groundwater Quality Monitoring Systems, Leonard Cilli and Richard Bizub, (Irrigation and Drainage: Saving at Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p75-79.
Chesapeake Bay Field Modeling and Monitoring Projects, Wesley E. Coleman, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p221-233.
Conceptual Design of a Monitored Retrievable Storage Cask Employing Yucca Mountain Containers, C. S. Erwin, D. R. Jackson, J. R. Oliver, M. S. Aljohani and D. B. Bullen, (High Level Radioactive Waste Management Program Committee, 1992), p2235-2240.
Condition Monitoring of Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p127-138.
A Context for Understanding the Significance of Radiation Exposures from the MRS, Dan Kane, Ricardo

Stein Sture, etc., 1972.), p121-138.

A Context for Understanding the Significance of Radiation Exposures from the MRS, Dan Kane, Ricardo Palabrica and Christine Van Lenten, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1938-1945.

Control of Contaminant Transport in Estuaries, Nikolaos D. Katopodes, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p370-381.

1992, p.3 (0-22), p.3 (0-22), p.3 (1-22), p.3 (1-22),

Development of Functional Requirements for a Moni-tored Retrievable Storage Installation, M. A. Duffy, T. A. Mozhi, P. N. Kumar and W. A. Lemshewsky, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1867-1874.

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, James D. Bowen, Steven H. Wolf and Curtis A. Meininger, (*Ports '92*, David Torseth, ed., 1992), p443-455.

1572, pp43-21, pp43-2

An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536. Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, K. J. Riggle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2323-2330. Waste Ma p2323-2330

p2323-2330.

Evaluating Polymer Concrete Bridge Expansion Joints Using Acoustic Emission, M. J. Woodard and S. S. Kuo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), P409-412.

The Evolution of an Environmental Monitor, Peter J. Dodds and R. Scott Sternberger, CE June 92, p56-58.

Field Monitoring of a Modular Detached Breakwater System, Robert M. Sorensen and J. Richard Weggel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p189-204.

ed., 1992), p189-204.
From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314.
Harbour Development in Southern Part of Thailand, Sutat Weesakul, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369.
Hazardous Waste Containment with a Bentonite Cutoff Wall, Chikashi Sato, Derek A. Braithwaite, Angelos Protopapas and Paul P. Stewart, (Grouting, Soll Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1298-1310.

Volraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rice, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-Hydraug 1364.

1304. Interfacing the Existing Cask Fleet with the MRS or Fitting Round Pegs Into Square Holes, J. W. Doman and R. E. Hahn, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1889-1895.

Jame Committee, 1992, p.169-1693.

Sause Influencing Colocation and Integration of Cask Maintenance and MRS Facilities, John A. Richardson, David E. Borchardt and Christopher Charles, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1992 1992), p1883-1888.

17921, p1883-1888.
Loading of Nutrients to Groundwater From High Source Areas During the Winter Period, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p373-578.

Search of Solutions, Mohammad Karamouz, ed., 1992), p573-578.
Mitigation of Harbor Caused Shore Erosion with Beach Nourishment Delayed Mitigation, St. Joseph Harbor, MI, Charles N. Johnson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p137-153.
Modal Analysis of Vibration Response for Condition Monitoring of Structures, George Hearn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p940-943.
Monitoring of Highway Pavements in Arizona Using Falling Weight Deflectometer, A. S. M. Mustaque Hossain and Larry A. Scofield, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p276-290.
Monitoring of the 1988 Boca Raton Beach Nourishment Project, Richard H. Spadoni, (Coastal Engineering Practice' '92, Steven A. Hughes, ed., 1992), p120-136.
The Monitoring of Water Conservation Behavior and Attitudes in Southern California, Duane D. Baumann, Eva Opitz and Diane Egly, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p117-134.

MRS Project Management, J. W. Doman and J. Vlahakis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1896-1902.

mittee, 1992), p1896-1902.
MRS Site Requirements and Considerations and the Potential Influences of Specific Technology Selections, David F. Fenster, John A. Richardson and K. Michael Cline, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p204-211.

MRS Using a FUELSTORMT Vault, M. K. Valentine and H. Günther, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p1875-1882. Municipal Field Screening Analyses, Gene N. Rattan and John L. McDaniel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p50-55.

53. Neural Network Based Classifiers in Vibrational Signature Analysis, M. F. Elkordy, K. C. Chang and G. C. Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073.
Optimal Locations of Monitoring Stations in Water Distribution System, Byoung Ho Lee and Rolf A. Deininger, EE Jan. Feb. 92, p4-16.

inger, EE Jan. Feb. 72, p+10.
Oxidation of Bromide by Hypochlorous Acid in Aqueous
Solutions: Stoichiometry and Kinetics, N. Phillip and
V. Diyamandoglu, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p634-639.

Project Management Oversight—Good Tool for Program Managers, Michael G. Goode, ME July 92, p243-253.

A Prototype Control System for Construction Monitor-ing, Dulcy M. Abraham, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p631-638.

Radiological Environmental Monitoring for the Yucca Mountain Site, K. J. Shenk, J. K. Prince and C. D. Sorensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2313-2317.

The Remote Monitoring of Waste Glass Melter Product, K. K. Li and A. Schneider, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p533-540.

Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p591-

Review of Ground-Water Quality Monitoring Network Design, Hugo A. Loaiciga, Randall J. Charbeneau, Lorne G. Everett, Graham E. Fogg, Benjamin F. Hobbs and Shahrokh Rouhani, HY Jan. 92, pl 1-37.

Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

The Role of the M&O in the High-Level Civilian Radio-active Waste Management System, Roland L. (Robby) Robertson, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2415-2416.

giam committee, 1992), p2415-2416.
Seismic Response of Landfill Slopes, D. G. Anderson, B. Hushmand and G. R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p973-989.
Settling Down Easy, Charles R. Heidengren, CE Dec. 92, p72-74.

Shielding and Criticality at the MRS Facility, Kenneth L. Ashe, Robert G. Eble and James R. Hilley, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2056-2061.

Site Qualification for Inclinometer Surveyng Using Tiltmeters, Howard Egan, Gary R. Holzhausen and Dan Sampson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551.

Slope Stabilization at the Forks of Butte Project, Stephen J. Klein and David K. Hughes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p905-922.

Status of Scour Instrumentation Development, Roy Trent and Ian Friedland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992). Jennings, ed p1088-1093.

Structural System Control Using Neural Networks, Dan-iel R. Rehak and James H. Garrett, Ir., Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p864-871.

Use of D-C Resistivity to Map Saline Ground Water, Christina L. Stamos, Steven K. Predmore and Adel A. R. Zohdy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p80-85.
Usefulness of Low-Cost Watershed Monitoring: A Case Study, James G. Turek and David W. Blaha, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p712-717.
Variations in Curve Number for a Reclaimed AML Site.

Karamouz, ed., 1992), priz-117.
Variations in Curve Number for a Reclaimed AML Site,
K. James Fornstrom and James L. Smith, Urrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p389-394.
VMT for Air Quality Purposes, Christopher R. Fleet and
Patrick DeCorla-Souza, (Transportation Planning and
Air Quality, Roger L. Wayson, ed., 1992), p126-141.

Moasoons
The Drought Occurrence and Response Measures in Taiwan Area, 1991, Hong-Hsi Hsu and Jinn-Chuang Yang, (Hydraulic Enjineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p977-987.

Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

Modeling Monsoon-Affected Rainfall of Pakistan by Point Processes, Thian Yew Gan and Zahoor Ahmad, WR Nov/Dec. 92, p671-688.

WK NOV. Dec. 22, po 11-058.
Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monsoon Climate of Tamil Nadu, India, Charles Rodgers and Mark Svendsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347.

### Monte Carlo method

Monte Carro method
Dynamic Response of Uncertain Two-Dimensional
Structures, C. G. Bucher and C. E. Brenner, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p132-135.
Evaluation of Probabilities Using Orientated Simulation,
Alberto H. Puppo and Raul D. Bertero, ST June 92,
p1683-1704.

Evaluation of Seismic Soil Response Using Stochastic Linearization, Jeen-Shang Lin, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p356-359.

Model Sensitivity Analysis in Near-Field Performance Assessment, N. C. Garisto and D. M. LeNeveu, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2284-2289.

A Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, Michael F. Sheridan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program p2033-2038. Committee, 1992).

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

ptimal Importance-Sampling Density Estimator, George L. Ang, Alfredo H-S. Ang and Wilson H. Tang, EM June 92, p1146-1163.

Polynomial Chaos for Nonlinear Random Vibration, R. Ghanem and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p404-407.

Pseudo-Simulation Method for Stochastic Problems, B. A. Zeldin and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p37-40.

ed., 1992), p37-40.
Reliability Analysis of Uncertain Systems Under Random Loadings, Rwey-Hua Cherng and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p49-52.
A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p69-72.
Stochastic Finite & Boundary Element Simulations, Gautam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123.

Stochastic Finite and Boundary Elements, Gautam Dasg-upta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p932-935.

Jonn M. Niedzweck, ed., 1992, p.932-933.
Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, Julio E. Pulido, Timothy L. Jacobs and Edison C. P. Lima, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p507-510.

Structural Reliability of Seismic Isolation System, Kazuta Hirata, Kenji Shirahama and Takahiro Somaki, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p57-60.

Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H.-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

A Unified Simulation Approach to Structural System Re-liability Analysis, Richard C. Turner and Michael J. Baker, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p104-107.

Use of Importance Sampling Constraints in System Optimization, Yingwei Liu and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p112-115.

350

Hydraulic Conductivity of Landfill Liners Containing Benzyltriethylammonium-Bentonite, James A. Smith, Pamela M. Frankin and Peter R. Jaffe, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p186-191.

Engineering a Monument, Evoking a Nightmare, Leo Argiris, Khosrow Namdar and Trevor Adams, CE Feb. 92, p48-51.

A Monumental Task, Victor Omelchenko, Thad Bergling, David J. Oleynik and Satish B. Shah, CE June 92, p60-

Advanced Construction Management for Lunar Base Construction—Surface Operation Planner, Robert P. Kehoe, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1546-1556.

Analysis of Space Crane Articulated-Truss Joints, K. Chauncey Wu and Thomas R. Sutter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p320-331.

Analysis of Two Lunar Oxygen Production Processes, Laura Hernandez and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p576-585.

Apollo 11 Ilmenite Revisited, E. N. Cameron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2423-2433.

Artificial Gravity Augmentation on the Moon and Mars, Let Schultheis, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1738-1747.

Assessing Lunar Resources with Remote Sensing, Sandra C. Feldman and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p586-596.

Behavior of Compacted Lunar Simulants Using New Vacuum Triaxial Device, Chandra S. Desai, Hamid Saadatmanesh and Thomas Allen, AS Oct. 92, p425-

Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1139-1149.

Beneficiation of Lunar Rocks and Regolith: Concepts and Difficulties, Lawrence A. Taylor and David S. McKay, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1058-1069.

Building Lunar Roads—An Overview, Bennett Rutledge, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p408-415.

Cable Structures and Lunar Environment, Mohammed Ettouney, Haym Benaroya and Nissim Agassi, AS July 92, p297-310.

- Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p308-
- Cargo Transport to the Lunar Surface Using a Three Rotor Sling, Brian Tillotson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1010-1021.
- Characterization of Emplacement Strategies for Lunar and Mars Missions, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1631-1644.
- Chemical Analysis in Space Exploration: A Lunar-based Chemical Analysis Laboratory (LBCAL), Mitchell K. Hobish, Charles W. Gehrke, Cyril Ponnamperuma and Robert W. Zumwalt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p565-575.

Concept Evaluation Methodology for Extraterrestrial Habitats, Richard M. Drake and Philip J. Richter, AS July 92, p282-296.

- Concept for a Lunar Array for Very Low Frequency Radio Astronomy, Kenneth A. Marsh, Michael J. Mahoney, Thomas B. H. Kuiper and Dayton L. Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1935-1940.
- Conceptual Design of Modules for a Lunar Base, Edward R. Haninger and Philip J. Richter, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

Concrete Construction on the Moon, T. D. Lin and Nan Su, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1359-1369.

- Constructing Radiation Shields with Textiles for Lunar Applications, J. Lewis Dorrity and James W. Brazell, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-377.
- Construction Challenges on Planetary Surfaces, H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p458-468.
- Construction of a Far-Term (2020+AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Mon-toya and Ann Campbell, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p427-440.

Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-281.

- Cylindrical Fabric-Confined Soil Structures, Richard A. Harrison, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl.23-134.
- Design and Construction Considerations for Lunar Outpost, H. Benaroya and M. Ettouney, AS July 92, p261-273.
- Design and Technology Assessment of Three Lunar Habi-tat Concepts, Warren D. Hypes, Robert L. Wright and Marston J. Gould, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p249-259.
- Design Codes for Lunar Structures, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl-12.
- Design Concepts for a Lunar Concrete Production Facili-ty, Richard M. Drake, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p34-42.

- Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., 'tein Sture, ed. and Russell J. Miller, ed., 1992), p774-785.
- Design Criteria for an Underground Lunar Mine, John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 183-1194.
- The Design of a Permanent Lunar Research Station, James R. Thomas, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212.
- ed. and Russell J. Miller, ed., 1992), p201-212. Design of a Support and Foundation for a Large Lunar Optical Telescope, Koon Meng Chua, Stewart W. Johnson and R. Sahu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1952-1963. Developing Technologies for Lunar-Based Astronomy, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1853-1864. Directions for Lunar Construction. A Derivation of Re-

Sture, ed. and Russell J. Miller, ed., 1992), p1653-1690. Directions for Lunar Construction. A Derivation of Requirements from a Construction Scenario Analysis, William C. Dias, Subramani T. Venksataraman, Randel A. Lindemann, Jacob R. Matijevic, Jeffrey H. Smith and Richard R. Levin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p357-367.

Dust Control Research for SEI, Kriss J. Kennedy and Jeffrey R. Harris, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p398-407.

Engineering, Construction, and Operations in Space III, 2 vols., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, 0-87262-868-X, 2513pp.

Engineering Issues for Early Lunar-Based Telescopes, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 92, p323-336.

Enhancing Decision Analysis Techniques for Lunar Base Construction Research, Walter W. Boles and David B. Ashley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p341-349.

Russell J. Miller, ed., 1992), p341-349.
Environmental Aspects of Lunar Helium-3 Mining, G. L. Kulcinski, E. N. Cameron, W. D. Carrier, III. and H. H. (Jack) Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p606-616.
Evaluating Lunar Base Conceptual Designs, Brent Heleckson, Richard Johnson and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p213-223.

Evaluation of Processing Options for Lunar Oxygen Pro-duction, Andrew Hall Culter and Robert D. Waldrom, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p704-713.

Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-200.

Extraterrestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillett and David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1048-1057.

The Feasbility of Using Solar Optics for Lunar Base Lighting, Kyle Williams and David Eijadi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p260-275.

The Feasibility of Processes for the Production of Oxygen on the Moon, Lawrence A. Taylor and W. David Carri-et, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p752-762.

Framework for Evaluation of Lunar Base Structural Concepts, Haym Benaroya and Mohammed Ettouney, AS Apr. 92, p187-198.

Genesis: The Creation of a Lunar Base, Paul Bialla, Na-than Nottke and Seishi Suzuki, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p13-24.

Geometric Modeling of Inflatable Structures for Lunar Base, Paul S. Nowak, Willy Z. Sadeh and Loretta A. Morroni, AS July 92, p311-322.

Morroni, AS July 92, p311-322.
Geotechnical Investigation Strategies for Lunar Base, Dan A. Brown and Glenn Rix, AS Apr. 92, p199-213.
A Horizontal Inflatable Habitatist for SEI, Kriss J. Kennedy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p133-146.
Hydrogen Reduction of Lunar Soil and Simulants, Robert O. Ness, Ir., Laura L. Sharp, David W. Brekke, Christian W. Knudsen and Michael A. Gibson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p617-628.
Indigenous Planetary Construction Material Through Soil

Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 11992), p617-628.

Indigenous Planetary Construction Material Through Soil Modification, Leonhard E. Bernold, Yasuyuki Horie and Mark B. Boslough, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p493-503.

Indigenous Resource Utilization in Design of Advanced Lunar Facility, Larry S. Bell, Michael G. Fahey, Todd K. Wise and Paul C. Spana, AS Apr. 92, p230-247.

Inflatable Structures of Non-Circular Cross Section, Eric E. Matsumoto, Shayan Pazargadi and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p171-182.

In-situ Release of Solar Wind Gases from Lunar Structures, Craig E. Miller, ed., 1992, p171-182.

In-situ Release of Solar Wind Gases from Lunar Soil, Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p373-546.

An Integrated Human/Plant Metabolic Mass Balance Model, A. B. Thompson, J. R. Schulz and C. G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p371-1788.

INTERLUNE Concept for Helium-3 Fusion Development, Harrison H. Schmitt, (Engineering, Construction, Con

MILET, CO., 1926, p. 177-17-08.

INTERLUNE Concept for Helium-3 Fusion Development, Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p804-

sure in a Lunar Inflatable Structure, Jeffrey

nternal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2360-2366.

Bottopic Separation of 3He/He From Solar Wind Gases Evolved from the Lunar Resolith, William R. Wilkes and Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.

Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chua, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p194-11951.

LIAC: A Closed Ecosystem Research Facility, Derek E. Shipiey, Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p195-1776.

Low Frequency Astronomy from Lunar Orbit, John P. Basart and Jack O. Burns, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p193-1924.

Lunar Base Pressure, O. Fraction, and ExtraHabitat Activity Suit Design, George W. Moverethaler. Edward

Sture, ed. and Russell J. Miller, ed., 1992), p1913-1924. Lunar Base Pressure, O. Fraction, and ExtraHabitat Ac-tivity Suit Design, George W. Morgenthaler, Edward G. Barrett, Dale A. Fester and Carolyn G. Cooley, En-gineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1720-1727.

Millett, ed., 1992.), pl 1/201-1/21.
Lunar Base Requirements for Human Habitability, Gary T. Moore, Kerry L. Paruleski, Janis Huebner-Moths, Joseph P. Fieber and Patrick J. Rebhola, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p224-239.

Lunar Farside, Mars Polar Cap, and Mercury Polar Cap Neutrino Experiments, Jonathan V. Post, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2252-2263.

Lunar Habitats—Places for People, Robert Pfeifer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p183-188.

Lunar He-3 Mining: Improvements on the Design of the UW Mark II Lunar Miner, Igor N. Sviatoslavsky, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1080-1091.

Lunar Liquid Oxygen Production Facilities, John Pulley, Lunar Liquid Oxygen Production Facilities, John Pulley,

Lunar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992).

p739-751.

Lunar Mining—Surface vs. in Situ—A Comparative Study, Paulo Roberto Pereira, Russell J. Miller and Gary S. Brierley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1195-1208.

Lunar Oasis, Michael B. Duke and John Niehoff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p48-68.

Miller, ed., 1992), p48-68.

Lunar Oxygen—The Reduction of Glass by Hydrogen,
Carlton C. Allen, David S. McKay and Richard V.
Morris, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p629-640.

Lunar Resource Base, John Pulley, Todd K. Wise, Claude
Roy and Phil Richter, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p43-492.

Lunar Surface Mine Feasibility Study, Brad R. Blair, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1092-1103.

Lunar Surface Mining Equipment Study, Egons R. Pod-

Lunar Surface Mining Equipment Study, Egons R. Pod-nieks and John A. Siekmeier, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1104-1115.

Lunar Transit Telescope Lander Design, Husam A. Omar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1880-1889.

The Lunar Transit Telescope (LTT): An Early Lunar-Based Science and Engineering Mission, John T. McGraw, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1865-1879.

Russell J. Miller, etc., 1992), p1803-1679.

Lunar-Based System to Supply Power to Earth: Summary of Concept, Benefits, and Development, David R. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2392-2399.

Mary Via the Monam-A Bobbst Lyna Resources-Based

Russell J. Miller, ed., 1992), p.2392-2399.

Mars Via the Moon—A Robust Lunar Resources-Based Architecture, Ed Repic and Wally McClure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1603-1630.

Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, Mark P. Nathan, Frank Barnes, Hon-Yim Ko and Stein Sture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-457.

Mechanical Equipment Requirements for Inflatable

Mechanical Equipment Requirements for Inflatable Lunar Structures, James M. Hines, Craig E. Miller and Richard M. Drake, AS Apr. 92, p248-256.

Mechanical Properties of Compacted Lunar Simulant Using New Vacuum Triaxial Equipment, Chandra S. Desas, Hamid Saadattanaesh and Tom Allen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1240-1249.

Mechanical Properties of Lunar Soil and Simulants, Valery V. Gromov and W. David Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p518-527.

Medical Care on the Moon, Ron Schaefer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1728-1737.

Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl728-1737.

Mitigation of Adverse Environmental Effects on Lunar-Based Astronomical Instruments, Charles L. Johnson, Kurtis L. Dietz, T. W. Armstrong and B. L. Colborn, (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl832-1841.

Mitigation of Dust Contamination During EVA Operations on the Moon and Mars, Peter E. Glaser, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl512-1522.

Mobile Continuous Lunar Excavation, John L. Paterson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl070-1079.

Modeling Effects of Chemical Explosives for Excavation on Moon, Deborah J. Goodings, Chaun-Ping Lin, Richard D. Dick, William L. Fourney and Leonhard E. Bernold, AS Jan. 92, p44-58.

Bernold, AS Jan. 92, p44-58.

A Modified Sulfate Process to Lunar Oxygen, Thomas A. Sullivan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p641-650.

On the Beneficiation and Comminution of Lunar Regolith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138.

On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, Rick Vargo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p885-896.

Operations Analysis for a Large Lunar Telescope, Christopher Thyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1591-1602.

Overview of Existing Lunar Base Structural Concepts, Task Committee on Lunar Base Structures, AS Apr. 92, p159-174.

p159-174.

Performance-Based Evaluation of Lunar Base Construction Equipment and Methods, Walter W. Boles, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p332-340.

Power Sources for Lunar Bases, Alastair J. W. Mayer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p763-773.

Preliminary Design of an Underground Lunar Mine, Scott B. Berk and Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed., and Russell J. Miller, ed., 1992), p1171-1182. p159-174.

pl1/1-1182.

Preliminary Investigation of a Lunar 16 Meter Optical Telescope, Walter H. Gerstle, N. N. V. Prasad, Kirk Cessac and Thomas Kratochvil, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2305-2316.

ressure Suit Requirements for Moon and Mars EVA's, Eric M. Jones and Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1701-1708.

Gauen, eu., stein sture, ed. and Russell J. Miller, ed., 1992), pl701-1708.

Principles of Control for Robotic Excavation, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl401-1412.

Production of Lunar Oxygen, Iron, Magnesium, and Silicon by Aqueous Hydrofluoric Acid Leaching, William N. Agosto, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p678-689.

Production of Oxygen by Electro-Reduction of Lunar Ortes, B. Mishra, D. L. Olson, J. J. Moore and W. A. Averill, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677.

A Proposed Methodology for Ranking Space Resource Utilization Processes, R. D. Waldron and A. H. Cutler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p690-703.

The Proposed NASA Lunar-Based Astronomical Observatories, Paul N. Swanson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 1798-1808. Prototype Lunar Base Construction Using Indigenous Materials, John Amin Happel, Kaspar Willam and Benson Shing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 112-122.

and Russell J. Miller, ed., 1992, p.112-122.

Recent Developments of the Carbotek Process for Production of Lunar Oxygen, Christian W. Knudsen, Michael A. Gibson, David J. Brueneman, Seishi Suzuki, Tetsuji Yoshida and Hiroshi Kanamori, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p597-605.

Resolith Dynamics, Mohammed M. Ettouney and Haym Benaroya, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1379-1388.

Regolith Mechanics, Dynamics, and Foundations, Mo-hammed M. Ettouney and Haym Benaroya, AS Apr. 92, p214-229.

Reliability Analysis of Lunar Structures Under Meteoroid Impact, William M. Bulleit and Eric P. Steinberg, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p9-12.

Ropeway Material Handling Systems for Lunar Mining Sites, H. Peter Huttelmaier and Jonathan R. Carrick, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 116-1126.

Miller, ed., 1992), p1116-1126.
SALSA: A Lunar Submillimeter-Wavelength Array, M. J. Mahoney and K. A. Marsh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1902-1912.
Simple and Efficient Methods to Produce Construction Materials for Lunar and Mars Bases, Yoji Ishikawa, Tetsuo Sasaki and Tetsumi Higasayama, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1335-1346.
Sintering of Lunar Glass and Basalt, Carlton C. Allen, Inv.

Sintering of Lunar Glass and Basalt, Carlton C. Allen, Joy A. Hines, David S. McKay and Richard V. Morris, (En-gineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-1218.

Some Considerations for Instrumentation for a Lunar-Based Solar Observatory, Raymond N. Smartt, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1890-1901.

Space Station & Lunar/Mars Life Support Research, Win-ston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 690-1700.

Spiral Mining for Lunar Volatiles, H. H. Schmitt, G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170.

Miller, ed., 1992), p1162-1170.
Steady State Composition with Low Fe<sup>2+</sup> Concentrations for Efficient O<sub>2</sub> Production by "Magma" Electrolysis of Lunar Soils, Larry A. Haskin and Russell O. Colson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p651-665.

Steam Injection System for Lunar Concrete, Dennis M. Pakulski and Kenneth J. Knox, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1347-1358.

Strength and Fracture of Glass in the Lunar Environ-ment, Daniel D. Allen, W. Howard Poisl and Brian D. Fabes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 232-1239.

Structural Design of Lunar Radio Telescope Using Inter-active CAD, Ferhat Akgul, Walter H. Gerstle and Stew-art W. Johnson, AS Jan. 92, p12-23.

Structural Materials from Lunar Simulants Through Thermal Liquefaction, Chandra S. Desai and Kirsten Girdner, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p528-536.

Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and

Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and H. Hawkins, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564.

System Concepts for a Series of Lunar Optical Telescopes, Max E. Nein, Billy G. Davis and John D. Hilchey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831.

Systems Integration of Lunar Campsite Vehicles, Stephen Capps and Theron Ruff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1976-1987.

Technical Issues for Lunar Base Structures, Brent Sherwood and Larry Toups, AS Apr. 92, p175-186.

Tensile-Integrity Structural Concepts for the Lunar Surface, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p276-283.

p276-283.

p276-283.
Thermal Investigation of a Large Lunar Telescope, Sherry T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1842-1852.
Transfer of Terrestrial Technology for Lunar Mining, Robert A. Hall and Patricia A. Green, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1150-1161.
Tripod Crane Concept for Lunar Surface Construction, Haruyuki Namba and Martin M. Mikulas, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295.
Use of Explosives on the Moon, Richard D. Dick, William L. Fourney, Deborah J. Goodings, Chaun-Ping Lin and Leonhard E. Bernold, AS Jan. 92, p59-69.
Uses for Lunar Crawler Transporters, Richard A. Kaden,

Lin and Leonhard E. Bernold, AS Jan. 92, p59-69.
Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389.
Using a Lunar Base Scenario Context in Business Education, Cathleen S. Burns and Sherry K. Mills, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2172-2187.
Usine Simulation to Evaluate On-Orbit Construction On-

1992), p2.172-2187.
Using Simulation to Evaluate On-Orbit Construction Operations, Todd C. Parfet, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2338-2350.
Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, D. W. Ming, D. C. Gelden and D. L. Henninger, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1709-1719. p1709-1719

pl/109-1719.

Vacuum Melting and Mechanical Testing of Simulated Lunar Glasses, J. E. Carsley, J. D. Blacic and B. J. Plet-ka, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 219-1231.

Very Low Frequency Radio Astronomy from Lunar Orbit, Nebojsa Duric, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1925-1934.

Mooring
Alternative Study for the Breakwater and Fishing Pier
Rehabilitation at Playland Park, Rye, New York,
David W. Yang, Michael J. McCarthy, Edward J.
Schmeltz, Joseph Bonasia and Ralph Butler, Jr.,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p632-645.
Case Study—Elliott Bay Marina Floating Moorage, Craig
S. Funston, (Ports '92, David Torseth, ed., 1992),
n263-274.

p263-274

p.203-274.
Los Angeles-Long Beach Harbors Model Enhancement Program, William C. Seabergh, S. Rao Vemulakonda and James Rosati, III., (Ports '92, David Torseth, ed., 1992), p.884-897.
Port of Portland's Berth 601 Floating Dock, Elmer Ozolin and Walter R. Haynes, (Ports '92, David Torseth, ed., 1992), p.150-163.
Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p.591-601.

Moorings
Broadside Current Forces on Moored Ships, William N.
Seelig, David Kriebel and John Headland, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p326-340.

Water-Level Oscillations in Esperance Harbour, Michael L. Morison and Jörg Imberger, WW July/Aug. 92,

Morphology
Finite/Macroelement Meshes in Neural Rat Growth,
Mona E. McAlarney, Letty Moss-Salentijn, Melvin L.
Moss and Manjit Basra, (Engineering Mechanics,
Loren D Lutes, ed. and John M. Niedzwecki, ed.,
1992), p960-963.

Form Comparison Without Anatomical Landmarks,
Gautam Dasgupta, Mona E. McAlarney, Colin Goodall, Letty Moss-Salentijn and Melvin L. Moss, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992, p972-975.

The Morphology and Dynamics of Natural and Laboratorry Grain Flows, Richard R. McDonald and Robert S.
Anderson, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), p748-751.

Use of Fractal Geometry Concepts in the Simulation of
Ground Water Flow and Transport Processes, Angelos
N. Findikakis, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p33Mortars

Mortars

Mortars
Fracture Analysis of Mortar-Aggregate Interfaces in Concrete, Kwang Myong Lee, Oral Buyukozturk and Ayad Oumera, EM Oct. 92, p2031-2047.

In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, Environmental Engineering Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p334-339.

Reliability-Based Design for Feezez-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p462-475.

Strength and Shrinkage of Natural Pozzolanic Mortar in Hot Weather, Jihad S. Sawan, MT May 92, p153-165.

Study of Three Dimensional Crack Tip Location of Mortar by Acoustic Emission, H. L. Chen and C. T. Cheng, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p25-36.

1392, p.22-30.
Utilization of Carbide Lime Waste in Cement Mortar Mixes, Waheeb A. Al-Khaja, Ismail M. Madany and Mohammed H. Al-Sayed, (Utilization of Waste Materials in Civil Engineering Construction, Filiary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p320-331.

Motion

Motion Coupied Vertical and Horizontal Galloping, Kathleen F. Jones, EM Jan. 92, p92-107. Equivalence Between Motions with Noise-Induced Jumps and Chaos with Smale Horseshoes, Michael Frey and Emil Simiu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedwecki, ed., 1992), p600-663. Motion Response and Wave Attenuation of Linked Floating Breakwaters, Iraklis A. Valioulis, WW Sept/Oct. 90, p558-574.

Nonlinear Impact and Chaotic Response of Slender Rocking Objects, Solomon C. S. Yim and Huan Lin, EM Sept. 91, p2079-2100.

Motion effects

A Sphere Moving Down an Inclined Bumpy Surface, Chy-an-Deng Jan, Hsieh Wen Shen, Chi-Hai Ling and Cheng-lung Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-

Financial Incentive Programs for Average-Size Construc-tion Firm, Roger W. Liska and Bill Snell, CO Dec. 92,

p867-676.
Managing and Motivating People on a Joint Venture Project, J. Daniel Carrier, ME Oct. 92, p362-366.
Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Nonmonetary Incentives: It Can be Done, Gary W. Fischer and Norman P. Nunn, ME Jan. 92, p40-52.

Motor vehicles

Alternative Fuels and Their Relations to TCM's for Santa Barbara County, Mahesh Talwar, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p327-346.

Bad Roads? Try Bogotá (ltr), Jose G. Monge, CE July 92,

Estimation of Travel Related Inputs to Air Quality Models, Terry L. Miller, Arun Chatterjee, Jerry Everett and Cindy McIlvaine, (*Transportation Planning and Air Quality*, Roger L. Wayson, ed., 1992), p100-125.

Quality, Roger L. Wayson, ed., 1992), p100-125.

Generating Detailed Emissions Forecasts Using Regional Transportation Models: Current Capabilities and Issues, Robert G. Ireson, Julie L. Fieber and Marianne C. Causley, (Transportation Flanning and Air Quality, Roger L. Wayson, ed., 1992), p142-160.

Integrated Software for Transportation Emissions Analysis, William Loudon and Malcolm Quint, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p161-176.

In-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transpor-tation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-254.

Keynote Presentation, Julie Belaga, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p7-13.

Photogrammetric Solution for Vehicle-Damage Investiga-tion, W. Faig, F. R. Wilson, D. King and T. Y. Shih, TE Nov./Dec. 92, p850-865.

Improving Steep Bends as Hairpin Curves on Mountain-ous Roads, B. K. Roy, TE Sept./Oct. 90, p667-682. Norway's Olympic Cavern, Rajinder Bhasin and Fredrik Løset, CE Dec. 92, p60-61.

Movable bed models
Bank Erosion Study of the Nile River at Bani Mazar, A.
F. Ahmed and M. M. Gasser, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p816-821.

Note on Lag in Bedload Discharge, Subhash C. Jain, HY June 92, p904-917.

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066.

1006.
Estimation of Chloride Diffusion Coefficient and Tortuosity Factor for Mudstone, F. S. Barone, R. K. Rowe and R. M. Quigley, GT July 92, p1031-1046.
An Intrusive Fluid Mud Surveying System, Allen Teeter, Glynn Banks, Michael Alexander and Andrew Salkield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017.
Roll-Waves on Non-Newtonian Mud Layer, Chingon No.

Roll-Waves on a Non-Newtonian Mud Layer, Chiu-on Ng and Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p892-

Should the U.S. Accept the Concept of Navigable Depth? John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Teeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082.

A. Hugnes, ed., 1992), p1099-1082.
The Transport and Fate of Drilling Muds, M. Kathryn Pickens and Wilbert J. Lick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumbers, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p202-214.
Wave Interaction with Fluid Mud in Rectangular Trench, Francis C. K. Ting, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p75-78.

Multiple objective analysis
Conjunctive-Use Planning in Mad River Basin, Califor-nia, Joy Matsukawa, Brad A. Finney and Robert Willis, WR Mar./Apr. 92, p115-132.

Design/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, J. M. Sloss, I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137.

Information Theory and Multi-Objective Evaluation, Jay R. Lund and Morris Israel, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992),

anaging Lower Colorado River, Daniel P. Sheer, Timo-thy J. Ulrich and Mark H. Houck, WR May/June 92, p324-336.

odel for Prescribing Ground-Water Use Permits, James W. Male and Frederick A. Mueller, WR Sept./Oct. 92, p543-561.

Multiobjective Analysis of Multireservoir System, S. Mohan and Diwakar M. Raipure, WR July/Aug. 92, p356-370.

p336-370.

Optimal Flood Warning Threshold: A Case Study in Connellsville, Pennsylvania, Duan Li, Yacov Y. Haimes, Eugene Stakhiv and David Moser, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283.

The Use of Influence Diagrams in Risk Management Involving Multiple Stakeholders, Y. Hong and G. E. Apostolakis, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p331-337.

Use of Mathematical Programming Methods for Complex Systems, James G. Uber, E. Downey Brill, Jr. and John T. Pfeffer, WR May/June 92, p281-294.

Multiple warnoes stylects.

Multiple purpose projects

Conjunctive-Use Planning in Mad River Basin, California, Joy Matsukawa, Brad A. Finney and Robert Willis, WR Mar./App. 92, pl 15-132.

Multiobjective Analysis of Multireservoir System, S. Mohan and Diwakar M. Raipure, WR July/Aug. 92,

p330-370.

Operation of the Central Valley Project During California's Drought, John F. Burke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p348-333.

Planning and Management of Water-Resource Systems in Developing Countries, M. Miloradov, WR Nov/Dec. 92, p603-619.

92, p603-619.

Research/Application of System Engineering to Water Resources Systems, Dingzhong Dai, Xueren Lu, Yuan-yu Guo and Xinyi Xu, WR May/June 92, p337-349.

Reservoir Operating Rules for Maximum Hydropower Production, Emmanuel U. Nzewi, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p543-548.

Multiple purpose structures
Ultimate Air Rights, Jeffrey Smilow, CE Nov. 91, p38-41.

Multiple use
Case Study: Design of a Traditional Village Master Plan,
Raul J. Cotilla, (Housing America in the Twenty-First
Century, Mehmet Inan, ed., 1992), pl 11-120.
Multilayered, Priority-Based Simulation of Conjunctive
Facilities, Elizabeth S. Andrews, Francis I. Chung and
Jay R. Lund, WR Jan. Feb. 92, p32-53.

Multiuser Sites for Contaminated Sediment Disposal, Pieter N. Booth and Kimberly A. Henson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p96-101.

Karamouz, ed., 1992), p96-101.
System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Ralph A. Wurbs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p498-503.

Multistory buildings
Building Protection from Tunneling in Downtown Los
Angeles, Loring A. Wyllie, Jr. and John A. Dal Pino,
(Excavation and Support for the Urban Infrastructure,
T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),
p107-118.

Construction Loads on Floors: Results of a Survey, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p499-502

Dynamics of Buildings with V-Shaped Plan, Sudhir K. Jain and Utpal K. Mandal, EM June 92, p1093-1112.

Experimental Study of Secondary Systems in Base-Isolated Structure, G. Juhn, G. D. Manolis, M. C. Con-stantinou and A. M. Reinhorn, ST Aug. 92, p2204-

Formulation of a Knowledge-Base for Building Design Simulation, Claude Bédard and Mathi Ravi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1129-1138.

In-Plane Floor Deformations in RC Structures, Hassan S. Saffarini and Musa M. Qudaimat, ST Nov. 92, p3089-3102.

Simplified Building Analysis with Sequential Dead Loads—CFM, Chang-Koon Choi, Hye-Kyo Chung, Dong-Guen Lee and E. L. Wilson, ST Apr. 92, p944-954.

Municipal engineering
Traffic Impact Study Ingredients, Peter A. Terry, (Site
Impact Traffic Assessment: Problems and Solutions,
Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C.
Sutaria, ed., 1992), p217-222.

Municipal governs

Critical Elements of Development Impact-Fee Programs, Arthur C. Nelson, James C. Nicholas and Julian C. Juergensmeyer, UP May 90, p34-47.

Jefferson Parish Storm Water Management, Marnie Win-ter and Kent Dussom, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p457-461.

Municipal Field Screening Analyses, Gene N. Rattan and John L. McDaniel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p50-

Traffic Impact Fees in Schaumburg, Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p170-174.

Urban Infrastructure: Our Crumbling POTW's, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p685-689.

Alkaline Sludge Management Options, Gary S. MacConnell, Morris V. Brookhart and Philip E. Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p394-398.

Design of Municipal Wastewater Treatment Plants, 2 vols (M&R No. 76), Joint Task Force of the American Society of Civil Engineers and the Water Environment Federation, (Joseph F. Lagnese, chmn.), 1991, 0-87262-Purphilir

Durability of MSW Fly-Ash Concrete, James R. Triano and Gregory C. Frantz, MT Nov. 92, p369-384.

In-Vessel Compost Systems: Technology Status, Philip E. Smith and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p291-296.

Management of Portland's Combined Sewer System,
Claudia L. Zahorcak, Lester E. Lee and Gordon A. Ni-Saving a Threatened Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p468-473.

MSW Incinerator Ash as Aggregate in Concrete and Ma-sonry, Rosmadi Abdul Rashid and Gregory C. Frantz, MT Nov. 92, p353-368.

M1 NOV. Y., 2335-308. Municipal Wastewater for Power Plant Cooling Water. Impacts on a Flow-Limited River, Mark Gerath, Fred Sellars, Monique Villars and Lisa Wolf, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p122-127.

Nassau County Sludge Management Multi-Phased Envi-ronmental Assessment, Steve Fangmann, John Pascuc-ci, Thomas Immerso, Carl Koch and Darlene McKin-ney, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274.

Linaweaver, a., 1972, p.209-21-9.
North Central Texas Municipalities Address the NPDES Stormwater Regulations Through Regional Coordination, George E. Oswald, Alan H. Plummer and Robert W. Brashear, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhowmik, ed., 1992), p62-63.

Oxygen Transfer and VOC Emissions from Sewer Drop Structures, Richard L. Corsi, Jennifer Shepherd, Lori Kalich, Hugh Monteith and Henryk Melcer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p305-310.

Partitioning of Elements by Refuse Processing, Robert K. Ham, Victor A. Hammer and Gary Boley, EE Sept./ Oct. 92, p725-743.

Resolving Environmental Concerns: Ash Beneficial Reuse, Richard W. Goodwin, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31.

Stability Analysis of a Municipal Solid Waste Landfill, Jonathan D. Howland and Arvid O. Landva, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1216-1231.

Stability Evaluation of Waste Landfills, Richard A.

pl210-1251.

Stability Evaluation of Waste Landfills, Richard A. Mitchell and James K. Mitchell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl152-1187.

Technologies for Utilization of Waste Tires in Asphalt Pavement, William E. Eleazer and Morton A. Bariaz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), pl93-201.

Municipal water
Computer Modeling Responsibilities for Municipalities,
Michael L Deas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p384

Implementing a Wellhead TCE Removal Project in Red-lands, Richard Corneille and Michael Huffstutler, (En-vironmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed. 1992), p315-320.

Modeling Instantaneous Residential Demands in Municipal Water Distribution Systems, Brian D. Barkdoll and Steven G. Buchberger, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Modeling Horizontally Nail-Laminated Beams, David R. Bohnhoff, ST May 92, pl 393-1406. Modeling Load-Slip Behavior of Nailed Joints, Ruy A. Sà Ribeiro and Patrick J. Pellicane, MT Nov. 92, p385-

Strength and Efficiency of Wood Box Columns, D. B. Van Dyer, ST Mar. 92, p716-722.

Narrowband
Fatigue of Welded Cruciforms Subjected to Narrow-Band
Loadings, S. Sarkani, D. P. Kihl and J. E. Beach, EM
Feb. 92, p296-311.

NASA
Architectures for Mission Control at the Jet Propulsion
Laboratory, Roger A. Davidson and Susan C. Murphy,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1567-1578.
The Army Corps of Engineer's (ACE) Interaction with the
Mission to Planet Earth Initiative, Robert C. Lozar,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p2094-2103.
Conceptual Design of Modules for a Lunar Base, Edward
R. Haninger and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),
p100-111.

p100-111

p100-111.

Design and Technology Assessment of Three Lunar Habitat Concepts, Warren D. Hypes, Robert L. Wright and Marston J. Gould, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p249-259.

Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1250-1261.

Frontloading for Successful Team-Built Projects, Louis J. Martinez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p504-507.

Mitigation of Adverse Environmental Effects on Lunar-Based Astronomical Instruments, Charles I. Johnson, Kurtis L. Dietz, T. W. Armstrong and B. L. Colborn, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-1841.

NASA's Future Plans for Space Astronomy and Astro-physics, Michael S. Kaplan, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1789-1797.

Novel University-Industry-Government Partnership, Constantine N. Papadakis, Paul C. Claspy, Theo & Keith and Michael J. Salkind, Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2128-2135.

p2126-2139.
On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, Rick Vargo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p885-896.

Operations Analysis for a Large Lunar Telescope, Christopher Thyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1591-1602.

A Pilot Sounding Rocket Project Utilizing Student Labor, Sue A. Johnson, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2317-2327.

The Proposed NASA Lunar-Based Astronomical Observatories, Paul N. Swanson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 798-1808.

Space Exposed Experiment Developed for Students, Dons K. Grigsby and Bob Melton, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2161-2171.

p. 201-2171.
Space Habitat Contaminant Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 1370-1378.

Using Simulation to Evaluate On-Orbit Construction Operations, Todd C. Parfet, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein, Sture, ed. and Russell J. Miller, ed., 1992), p.2338-2350.

Sture, ed. and Russell J. Miller, ed., 1992), p.238-2390.
The Virtual Mission: A Step-Wise Approach to Large
Space Missions, Elaine Hansen, Morgan Jones, Adrian
Hooke and Richard Pomphrey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),
ed. 323, 1239. p1523-1529.

p1523-1529.
A Vision for Planetary Exploration, John F. Connolly, Robert K. Callaway, Mark K. Diogu, Gene R. Grush, E. Mason Lancaster, William C. Morgan, David A. Petri, Barney B. Roberts, Lester A. Pieniazek, Thomas M. Polette and Larry D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-2195.

National Research Council

Despite Study, Questions Surround Yucca Mountain, CE July 92, p14,16.

NRC Offers Research Awards, CE Feb. 92, p12. Panel Calls for National Wind Engineering Program, CE Dec. 92, p18.

National Science Found

Engineer Shortfall a Myth: House Panel Calls NSF Study 'Seriously Flawed', NE May 92, p16.

NSF Coalitions Hope to Revolutionize Education, CE June 92, p24,27.

NSF Funds Engineering-Education Coalitions, NE June 92, p15.

Quake Clearinghouse Selected, CE June 92, p11.

afer Truss-Type Structures is UConn Researcher's Aim, NE Feb. 92, p16.

National Weather Service

Not Just Talking About the Weather, CE June 92, p11.

Natural frequency

Asymptotic Analysis of TLP Tendons and Risers, C. Oran, EM Jan. 92, p56-73.

Condition Monitoring of Structures Using Transient Response, George Hearn, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p.127-138.

Effect of Active Control on Closely Spaced Natural Frequencies, K. Xu, P. Warnitchai and T. Igusa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p693-696.

Quantitative NDE Technique for Assessing Damages in Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM July 92, p1468-1487.

Response of Space Structures Under Sudden Local Damage, Ramesh B. Malla and Baihai Wang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p909-920.

Theoretical Study of Crack-Induced Eigenfrequency Changes on Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM Feb. 92, p384-396.

Natural gas Evaluation of Erosion Potential at Pipeline Crossings, David T. Williams, Samuel Carreon, Jr. and Jeffrey B. Bradley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694.

ed. and Nani G. Bhowmik, ed., 1992), p689-694.

Navier-Stokes equations

About Moving Contact Lines, Shih-An Yang and Allen T.

Chwang, EM Apr. 92, p735-745.

Computation of Flow in Ice-Covered Dune-Bed Channels, J. Y. Yoon, V. C. Patel and R. Ettema, (Engineering Machanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p385-388.

Computation of Wind Pressures on L-Shaped Buildings, Theodore Stathopoulos and Yongsheng Zhou, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p349-352.

Landslide-Generated Waves in Reservoirs, C. J. Tang and J. F. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p320-223.

Nonlinear Water Waves Generated by Submarine and Aerial Landslides, P. Henrich, WW May/June 92, p249-266.

Aerial Labistance, p. 249-266. Buoyancy Viscous Spreading, Sujeeva A. Oil Under Ice: Buoyancy Viscous Spreading, Sujeeva A. Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Solutions, 1902, p.102-107. Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p102-107.
Solving Turbulent Flows Using Finite Elements, John I. Finnie and Roland W. Jeppson, HY Nov. 91, p1513-

Two-Dimensional Flow in Embankments, Nazeer Ahmed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p636-641.

Navigation
The Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412.

prof.-41.2. oastal Engineering Practice '92, Steven A. Hughes, ed., 1992, 0-87262-866-3, 1100pp. esign and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p554-570.

ed., 1992), p554-570.

Design of a Mechanical Refuse Barrier, Edward J. Schmeltz, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p680-696.

Design of Bridge Pier Pile Foundations for Ship Impact, Bogdan O. Kuzmanovic and Manuel R. Sanchez, ST Aug. 92, p2151-2167.

Harbour Development in Southern Part of Thailand, Sutat Weesakul, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369.

Honolulu Harbor Ship Traffic Simulation and Animation Study, James R. Walker, Vedat Demirel and Michael C. Leue, (Ports '92, David Torseth, ed., 1992), p868-883.

853. Hydraulic and Geomorphic Classification of the Upper Mississippi River System: Pilot Study of Three Pools, Nani G. Bhowmik and Renjie Xia, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p666-671.

Hydraulic Structures Versus Zebra Mussels, John J. Ingram and Andrew C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611.

1992), p606-611.

An Intrusive Fluid Mud Surveying System, Allen Teeter, Glynn Banks, Michael Alexander and Andrew Salkield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017.

Laptop Automated Navigation Aid Positioning System with Differential GPS, Charles F. Klingler, Michael R. Wroblewski and Scott Krammes, SU Nov. 92, p130-134.

134. LGG System for Emergency Response Applications, Anthony A. Saka, SU Aug. 92, p90-98.
Return Flows in Large Rivers Associated with Navigation Traffic, Nani G. Bhowmik, B. S. Mazumder and Ta Wei Soong, (Hydraulic Engineering: Saving a Threathend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p760-765.
Riprap Design in Marine Terminals, Sandra K. Martin and Stephen T. Maynord, (Ports '92, David Torseth, ed., 1992), p364-375.
Scheduling Maintenance Dredging on Single Reach with Uncertainty, Jay R. Lund, WW Mar./Apr. 90, p211-231.

231

231.
Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-hsi Chu and Gilbert K. Nersesian, (Coaste Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.
Securing Strategic National Security Objectives Through Maritime Activities, S. G. Phernambucq and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-

Sediment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p673-

687

682. Should the U.S. Accept the Concept of Navigable Depth? John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Teeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082. Structural Design of the GN&C Navigation Base for the Space Station Freedom, Lavonia Grant and Fred Cutting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p839-849, Peter W. Solitys, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662. Use of Portable Simulator in Designing Channel Improvements for Port of Brownsville, Texas, Dennis Wayne Webb and Larry Leon Daggett, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614. We Need to Integrate Water Transportation and Environ-

psyb-014.

We Need to Integrate Water Transportation and Environmental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p403-406.

Aeration at Ohio River Basin Navigation Dams, Steven F, Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens and George H. Taylor, EE Mar./Apr. 90, p361-373.

p361-375.

Navy
Analysis of Dredged Material Deposition Patterns, Eric E. Nelson and Billy H. Johnson, (Ports '92, David Torseth, ed., 1992), p470-479.

Design and Construction of Waterfront Facilities at U.S. Navy Homeport at Ingleside, Texas, Edward H. Stehmeyer, Jr., David W. Mock and Donald L. Goddeau, (Ports '92, David Torseth, ed., 1992), p644-656.

Environmental Monitoring and Operator Guidance System (EMOCS) for Shallow Water Ports, Andrew L. Siver, (Ports '92, David Torseth, ed., 1992), p535-547.

Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, Kevin A. Pierce and Laszio Buzasi, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p656-679.

Pier and Wharf for U.S. Navy Homeport, Everett, Arnfinn Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (Ports '92, David Torseth, ed., 1992), p616-629.

A Removable Submarine Cover for Drydock No. 2 Modernization, Ted Bobroski and Joseph J. Bonasia, (Ports '92, David Torseth, ed., 1992), p506-519.
Seabees Celebrate Golden Anniversary, NE Mar. 92, p3.
The U.S. Naval Facilities Offishore Platform Inspection, Maintenance, Repair and Rehabilitation Program, T. Regin and T. O'Boyle, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p531-545.
U.S. Navy Deployable Waterfront Facility, Glenwood Bretz, Julio Giannotti and Arturo Calisto, (Ports '92, David Torseth, ed., 1992), p520-534.

358

David Torseth, ed., 1992), p520-534.

Nearshore circulation
Field Verification of a Wave-Induced Current Model,
Jane McKee Smith, (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan
Blumberg, ed., Ralph Cheng, ed. and Craig Swanson,
ed., 1992), p95-104.

Laboratory Study of Oil Slick Subjected to Nearshore Circulation, A. C. L. Borthwick and S. A. Joynes, Ed.
Nov./Dec. 92, p905-922.

Modeling Nearshore Currents in the Vicinity of the Endicott Causeway, Alaska, Peter Hamilton, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p227-239.

Wave Induced Vortex Near Seashore, Tai-Wen Hsu,
Shan-Hwei Ou and Chun-Wei Sun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,
ed., 1992), p466-469.

ed., 1992), p466-469.

Negative skin friction Performance of Procast Driven Piles in Marine Clay, Chun F. Leung, R. Radhakrishnan and Siew-Ann Tan, GT Apr. 91, p637-657.

degligence tandard of Care for Delivery of Engineered Products, James C. Porter, El Apr. 90, p193-201.

Negotiations
Negotiations
Negotiating the Voluntary Siting of Nuclear Waste Facilities—An Impossible Mission Made Possible, Robert M. Mussler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-

Planning Your Negotiation, Michael Lee Smith, ME July 92, p254-260.

92, p.234-200.
Yes of Interactive Simulation Environments for the Development of Negotiation Tools, Allison M. Keyes and Richard N. Palmer, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p68-73.

Neighborhoods
Circulation Issues and Impacts—Corridor Redevelopment Santa Ana, CA—A Case Study, T. C. Sutaria and Abi Mogharabi, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p223-227.
Neo-Traditional Neighborhoods: A Solution to Traffic Congestion? John R. Stone and Charles A. Johnson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p72-76.

Netherlands
Pre-Selective Measurements for SHRP-NL Project Using
the Lacroix Deflectograph, Wim Th. Hoyinck and Joop
van Zwieten, (Road and Airport Pavement Response
Monitoring Systems, Vincent C. Janoo, ed. and Robert
A. Eaton, ed., 1992), p63-77.

A. Eaton, ed., 1992), po5-17.

Network analysis

Generalized Least Squares Analyses for Hydrologic Regionalization, Jery R. Stedinger and Gary D. Tasker, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p7-12.

Network Model Analysis of Traffic Patterns Resulting from a Proposed Regional Mall, Stephen Lawe, Norman Marshall and Peter Ryner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p89-93.

Network design
Review of Ground-Water Quality Monitoring Network
Design, Hugo A. Loaiciga, Randall J. Charbeneau,
Lorne G. Everett, Graham E. Fogg, Benjamin F. Hobbs
and Shahrokh Rouhani, HY Jan. 92, p11-37.

Network reliability
Entropy-Based Redundancy Measures in WaterDistribution Networks, Kofi Awumah, Ian Goulter and
Suresh K. Bhatt, HY May 91, p595-614.

Networks
Application of Neural Networks in Earthmoving Equipment Production Estimating, Saeed Karshenas and Xin Feng, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p841-847.
Assessing the Potential of E-Mail for Engineers: Case Study, F. Safayeni, A. Yu, L. Purdy and E. Lee, ME Oct. 92, p346-361.

A Connectionist Vertical Formwork Selection System, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1952), p1171-

Distributed Approach to Optimized Control of Street Traffic Signals, Nicholas V. Findler and John Stapp, TE Jan./Feb. 92, p99-110.

Entropy-Based Redundancy Measures in Water-Distribution Networks, Kofi Awumah, Ian Goulter and Suresh K. Bhatt, HY May 91, p595-614.

ontest B. Dhatt, IT May 91, D935-614.
Integration of AM/FM/GIS with MODELING/DESIGN on Large Utility PC Network, J. Darrell Bakken and Charline M. Avey, (Computing in Civil Engineering and Geographic Information Systems Symposium, Parry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

Knowledge-Based Simulation of Construction Plans, Abdalla M. Odeh, Iris D. Tommelein and Robert I. Carr, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1042-1049.

Neural Network Based Classifiers in Vibrational Signa-ture Analysis, M. F. Elkordy, K. C. Chang and G. C. Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073.

August V. Wight, ed., 1972, p1000-1073.

Neural Network for Predicting Concrete Strength, Trefor P. Williams, Anil Khajuria and P. Balaguru, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992, p1082-1088.

Neural Network Modeling of the Mechanical Balancia of

Wright, ed., 1992), p1082-1088.

Neural Network Modeling of the Mechanical Behavior of Sand, Glenn W. Ellis, Chengwan Yao and Rongda Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p421-424.

Neural Networks and their Applicability within Civil Engineering, James H. Garrett, Ir., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1155-1162.

Neural Networks Based Damage Detection in Structures, Zbigniew P. Szewczyk and Prabhat Hajela, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1163-1170.

Neuroform—Neural Network System for Vertical Form-work Selection, Sagar V. Kamarthi, Victor E. Sanvido and Soundar R. T. Kumara, CP Apr. 92, p178-199.

and Southait N. I. Rumara, Cr. Apr. 3c, p. 18-199.
Structural System Control Using Neural Networks, Daniel R. Rehak and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p864-871.

Time Series Prediction Using Neural Networks, James Villarreal and Paul Baffes, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p.268-28.

Transaction-Management Issues in Collaborative Engineering, Shamim Ahmed, Duvvuru Sriram and Robert Logcher, CP Jan. 92, p85-105.

ransients in Canal Network, Rajeev Misra, K. Sridharan and M. S. Mohan Kumar, IR Sept./Oct. 92, p690-707.

Applications of Performance Assessment in Support of the Exploratory Studies Facility (ESF) Design, M. E. Fewell, S. R. Sobolik, J. H. Gauthier, L. E. Shephard and L. S. Costin, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p665-670.

Characterization of the Topopah Spring and Tiva Canyon Tuffs at Yucca Mountain, Aject Singh, Shamsuddin Ilias and Gary Tatterson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1953-1958.

Conservative Tracers for the C-Well Hydraulic Testing, Tonya Dombrowski, Gary Coates and Klaus J. Stetzen-bach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1991-1996.

Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, C. S. Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271.

Deterministic Geologie Processes and Stochastic Modeling, Christopher A. Rautman and Alan L. Flint, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p1617-1624.

Developing a Functioning Visualization and Analysis System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p846-851.

Early Evaluation of the Suitability of the Yucca Mountain Site, Jean L. Younker, Larry D. Rickertsen and Bruce R. Judd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management) Program Committee, 1992), p517-524.

Economic Impact of Nuclear Facilities, Eric Knox and Scott Burnison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p949-953.

Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, K. J. Riggle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2323-2330.

Estimating the Consequences of Significant Fracture Flow at Yucca Mountain, John H. Gauthier, Michael L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Fault Stress Analysis for the Yucca Mountain Site Characterization Project, S. J. Bauer, M. P. Hardy, R. Godrich and M. Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277.

Field Research Program for Unsaturated Flow and Transport Experimentation, V. C. Tidwell, C. A. Rautman and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p704-709.

The Flow to Licensing Technical Data Tracking and the Licensing Support System (LSS), Jan Statler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2088-2092.

A Forecasting Model of Gaming Revenues in Clark County, Nevada, B. Edwards, A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p943-948

Geochemical Evidence for Waning Magmatism and Poly-cyclic Volcanism at Crater Flat, Nevada, Frask V. Perry and Bruce M. Crowe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2356-2365.

Management ringram Committee, 1992, pp.2306-2304. High Resolution Seismic Imaging for Characterizing Fractures in Potential Sites for Nuclear Waste Reposi-tories, Ernest Majer, Larry Myer, John Peterson and Jung Mo Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-gram Committee, 1992), p1111-1121.

Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, Carl B. Ellis and Cindy L. Rogers, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2207-2211.

Introductory Remarks for the International High-Level Radioactive Waste Conference Technical Session on Site Chracterization: Approaches, Concepts, Concerns', Philip S. Justus and Jane R. Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p746-747

1992, p. 746-74.7.
The Lathrop Wells Volcanic Center: Status of Field and Geochronology Studies, B. Crowe, R. Morley, S. Wells, J. Geissman, E. McDonald, L. McFadden, F. Perry, M. Murrell, J. Poths and S. Forman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p1997-2013.

Longevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, Bruce D. Marsh and Ronald G. Resmini, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2025-2032.

Management, High Level Radioactive waste Management Program Committee, 1992), p2025-2032.

Management of Scientific and Engineering Data Collected During Site Characterization of a Potential High-Level Waste Repository, Claudia M. Newbury and Gail W. Heitland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2093-2097.

Modeling Fault Rupture Hazard for the Proposed Repository at Yucca Mountain, Nevada, K. J. Coppersmith and R. R. Younga, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p142-1150.

Needed Geologic and Seismic Rulemaking for HLW Repositories, Jay L. Smith, (High Level Radioactive Waste Management Program Committee, 1992), p685-690.

New Approaches for Regional Ground-Water Modeling in Southern Nevada, A. Keith Turner and Kenneth E. Kolm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p852-858.

Nuclear Waste Repository Program Oversight: Strategies

Committee, 1992), p852-858. Nuclear Waste Repository Program Oversight: Strategies of the Situs Jurisdiction, Phillip A. Niedzielski-Eichner and Elgie Holstein, (High Level Radioactive Waste Management Program Committee, 1992), p1927-1937. An Overview of the Yucca Mountain Global/Regional Climate Modeling Program, Robert P. Sandoval, Yugal K. Behl and Starley L. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1188-1195. p1188-1195.

Waste Management Program Committee, 1992), p1188-1195.

Paleohydrologic Implications of the Stable Isotopic Composition of Secondary Calcite Within the Tertiary Volcanic Rocks of Yucca Mountain, Nevada, Joseph F. Whelan and John S. Stuckless, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581.

Performance Assessment for a High-Level Waste Repository at Yucca Mountain, R. Shaw, R. F. Williams, J. C. Stepp and R. McGuire, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p869-873.

Potential Increases in Natural Radon Emissions Due to Heating of the Yucca Mountain Rock Mass, C. Pescatore and T. M. Sullivan, (High Level Radioactive Waste Management Trogram Committee, 1992), p1599-1606.

Preclosure Seismic Hazards and Their Impact on Site Suitability of Yucca Mountain, Nevada, J. Duane Gibson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1151-1158.

Quantity and Quality of Nuisance Waster in the Las Vegas Valley. Stept a Mircell and Richard H. Ersane (Ferrick).

Valley, Steve A. Mizell and Richard H. French, (Envi-ronmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed. 1992), p128-132.

Radiological Environmental Monitoring for the Viscoa

Radiological Environmental Monitoring for the Yucca Mountain Site, K. J. Shenk, J. K. Prince and C. D. Sorensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2313-2317.

Records Management in Support of the Licensing Process for the High Level Radioactive Waste Facility, Dennis G. Sheats, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1922), p2083-2081.

Recurrence Models of Volcanic Events: Applications to Volcanic Risk Assessment, Bruce M. Crowe, R. Picard, G. Valentine and F. V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2344-2355.

Regulatory Considerations in Design of the Exploratory Studies Facility, Michael W. Parsons and Michael D. Voegele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p671-678

A Regulatory Perspective on Design and Performance Re-quirements for Engineered Systems in High-Level Waste, Robert M. Bernero, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p813-831.

The Role of the M&O in the High-Level Civilian Radio-active Waste Management System, Roland L. (Robby) Robertson, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Manage-ment of the Level Radioactive Waste Management Pro-gram Committee, 1992), p2415-2416.

Rural-Urban Water Transfers in Nevada: Solution or Problem? John W. Fordham, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p492-497.

Science and Students: Yucca Mountain Project's Educa-tional Outreach and Public Tour Programs, April Van-Camp Gil, Paula Austin, Erin L. Larkin and Effic Harle, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1902). 1810. 1826 Committee, 1992), p1819-1825.

Site Characterization and the Method of Multiple Working Hypotheses, David F. Fenster, K. Michael Cline, John A. Blair and Jane Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), arXiv:251.754.

p751-754.

Social and Science Issues in the Local Environment, L. Gilbert and M. Robinson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1813-1818.

The Status of Yucca Mountain Site Characterization Ac-tivities, Carl P. Gertz, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p748-750.

ment Frogram Committee, 1992, p. 14-10.

Strontium Isotope Geochemistry of Calcite Fracture Filings in Deep Core, Yucca Mountain, Nevada—A Progress Report, Z. E. Peterman, J. S. Stuckies, B. D. Marshall, S. A. Mahan and K. Futa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1582-1586.

Summary of the Exploratory Studies Facility Alternatives Study, L. S. Costin, A. W. Dennis and A. L. Stevens, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

mittee, 1992), p643-649.

TBM Performance Prediction in Yucca Mountain Weld-ed Tuff From Linear Cutter Tests, Richard Gertsch, Levent Ozdemir and Leslie Gertsch, (High Level Radi-oactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1516-1520.

Teleseismic Tomography of the Yucca Mountain Region: Volcanism and Tectonism, John R. Evans and Moses Smith, III., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2372-2380.

Temperature Scenarios for a Repository at Yucca Mountain, Benjamin Ross, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p784-789.

Temporal and Spatial Distribution of Basaltic Volcanism in the Pancake and Reveille Ranges North of Yucca Mountain, K. A. Foland and S. C. Bergman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2366-2371.

Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, Kalyan K. Bhattacharyya, Richard McDonaid and Robert S. Saunders, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1521-1526.

Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, Paul G. Ka-plan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1643-1646. Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p. 1196-1198. p1196-1199

pl 196-1199.
Variations of Hydrological Parameters of Tuff and Soil, J. S. Y. Wang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pr27-731.
Yucca Mountain Project Total-System Performance Assessment Preliminary Analyses: Overview, R. W. Barnard and H. A. Dockery, (High Level Radioactive Waste Management Program Committee, 1992), p874-881.
The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, Nona F. Shepard and Donald L. Champagne, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Committee, 1992), p593-599.

New England Extended Experience with a Short-Term Hydropower Scheduling Model in New England, Paul H. Kirshen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p299-304.

iew Hampshire

New Hampshire Hampton, New Hampshire: Beach Nourishment Project, Franklin W. Fessenden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p60-72.

New Jersey
Colgate Palmolive Transportation Impact Case Study,
Martin J. Wells and Jay S. Bockisch, (Site Impact Traffic Assessment: Problems and Solutions, Robert E.
Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria,
ed., 1992), p154-158.

ed., 1992), p154-138.
Corps to Restore Jersey Shore, CE Dec. 92, p10,13.
Critical Public Issues for Well Head Protection, Daniel J.
Van Abs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p274-279.
Land Development Regulations: Roadblock to Affordable Housing, Thomas J. Olenik and S. L. Cheng, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p39-47.

New Mexico

Perspectives on the Science Advisor Program at Sandia National Laboratories, P. C. Bennett, R. B. Heath, Podlesny and P. A. Channon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1826-1831.

New York City
Bridge Barges Into New York, CE May 92, p1826-1831.
Bridge Barges Into New York, CE May 92, p18-19.
Bridge Rehab is Bad Idea (ltr), Irwin Fruchtman, CE Feb. 92, p35.
Call for Nominations for Bard Awards, CE Apr. 92, p10.
City to Inspectors: Get Back to Work, CE Oct. 92, p8.
Cooper Union Aids Ex-Soviet Engineers, CE Sept. 92, p15.
From Sludge to Parkey of the Parke

From Sludge to Brokered Biosolids, Teresa Austin, CE

From Sludge to Brokered Biosolids, Teresa Austin, CE Aug. 92, p32-35.
GIS: New York's Pipe Dream, Harvey P. Moutal, David R. Bowen and Wendy Dorf, CE Feb. 92, p66-67.
Insurance Change May Save Millions, CE July 92, p11.
Modeling of CSO Impacts in Jamaica Bay and Tributaries, John P. St. John, William M. Leo and Robert Gaffoglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p90-95.
Music School Trumpets the Sounds of Silence, CE Mar. 92, p20-25.

92, p20,22.

rinciples of Holistic Medicine Applied to Infrastructure Maintenance: A Test Case, Fred Catapano, CE Jan. 92, p68-69. Retaining Wall to Keep Rock Out of School, CE Nov. 92.

Tunnel Seepage Control by the Interior Grouting Method, Bruce A. La Penta, Reuben H. Karol and Charles H. Arnold, (*Grouting*, Soil Improvement and Geosyntheics, Roy H. Borden, ed. Robert O. Holtz, ed. and Ilan Juran, ed.

Tunnel Takes Cathodic Protection, Guang-Nan Fanjiang, Michael Mazzuca, Lin Nathan and Robin Pawson, CE Nov. 92, p59-61.

Ultimate Air Rights, Jeffrey Smilow, CE Nov. 91, p38-41.

New York, State of

Geomorphic and Hydraulic Factors Affecting Stream Sta-bility at New York Thruway Bridges, Sufian A. Khondker, Keith E. Giles, Carl J. Montana and Mark A. Hixson, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p912-918. New York Canal Inspection Drawing to a Close, CE Jan. 92, p24-25.

94, p.24-23.
95, p.24-23.
Regional Evaluation of Transportation Lifelines in New York State with the Aid of GIS Technology, Masanobu Shinozuka, Michael P. Gaus, Seong H. Kim and George C. Lee, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p.102-109.

Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p19-24.

Newton-Raphson method Design of RC Sections with Generic Shape under Biaxial Bending, Andrea Dall'Asta and Luigino Dezi, ST Apr. 92, p1138-1143.

Solving Circular Curve Using Newton-Raphson's Meth-od, Chun-Sung Chen and Lih-Shinn Hwang, SU Feb. 92, p24-32.

Nile River

Evapotranspiration in Sudan Gezira Irrigation Scheme, Ahmed S. A. Hussein and Ahmed K. El Daw, IR Nov./ Dec. 89, p1018-1033.

Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.

Nile River Valley

Computerized Surveying Helps Egyptians Map Nile, CE May 92, p26-27.

**Biochemical Control of Sulfide Production in Wastewater** Collection Systems, Ricardo B. Jacquez and Hamdy H. El-Rayes, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p327-333.

Linaweaver, ed., 1992), p327-333.

Effluent Nitrite Accumulation in the Heterotrophic Denitrification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

Nitrate Risk Management under Uncertainty, Yong W. Lee, Mohamed F. Dahab and Istvan Bogardi, WR Mar/Apr. 92, p151-165.

Predicting Water Quality as Affected by ET Using the

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojas and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p158-163.

Ted Engman, ed., 1992), p158-163. Simulation of Two Approaches to Curb Potential Buildup of Nitrates in Groundwater, D. Adelman, S. Zheng and M. F. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p611-616. Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Randall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-286.

Nitrification

Nitricasion

Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, Paul A. Dombrowski and James C. O'Shaughnessy, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p36-41.

Full Scale Side-By-Side Testing of BNR Technologies, Bruce B. Burns, Angela S. Essner, Dave L. Montgom-ery, Amarjit Sokhey and Manu A. Patel, (Environmen-tal Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992),

p30-35.

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

Non-Traditional Water Quality Approaches, Carl P.

co., 1992), p41-422.

Non-Traditional Water Quality Approaches, Carl P.
Houck, Joan Brooks, Ronald D. French and Duane
Humble, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p433-438.

Process Pain for Biosemphission of Nitrogen Spacies

Linaweaver, ed., 1992), p435-438.

Process Design for Bioremediation of Nitrogen-Species
Contamination of Soils and Groundwater, Paul D.
Turpin, J. Michael Henson and Steven L. Martin, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p175-179.

OSAR Parameters for Toxicity of Owneric Control

ed., 1992), p175-179. QSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, N. H. Tang, D. J. W. Blum, R. E. Spece and N. Nirmalakhandan, EE Jan./Feb. 92, p17-37. Thermodynamic Model of Nitrification Kinetics, Thongchai Yantarasri, Albert Garcia, III. and David Brune, EE July/Aug. 92, p568-584.

Fiffuent Nitrite Accumulation in the Heterotrophic Deni-trification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

Thermodynamic Model of Nitrification Kinetics, Thongchai Yantarasri, Albert Garcia, III. and David Brune, EE July/Aug. 92, p568-584.

Nitrogen
Controlling Nitrogen in Coastal Waters, Rosemary
Monahan, Susan Beede, Joseph Costa and Bruce Rosinoff, CE Mar. 92, 956-59.
Effect of Nitrogen on Yield Using Bioenergetics Theory,
R. L. Droste, EE Sept./Oct. 92, p814-820.
Process Design for Bioremediation Nitrogen-Species
Contamination of Soils and Groundwater, Paul D.
Turpin, J. Michael Henson and Steven L. Martin, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p175-179.
Studge Loading Rates for Forest Land, D. A. Haith, J. E.
Studge Loading Rates for Forest Land, D. A. Haith, J. E.

Sludge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar./ Apr. 92, p196-208.

Nisrogen compounds
Flux of Metals Between Sediment and the Water Column,
N. S. Simon and K. O. Dennen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p390-391.

ed., 1976.), p. 1970.

Nitrogen removal

Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, Paul A. Dombrowski and James C. O'Shaughnessy, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p. 36-41.

Full Scale Side-By-Side Testing of BNR Technologies, Bruce B. Burns, Angela S. Essner, Dave L. Montgomery, Amarjit Sokhey and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p. 30-35.

Modeling and Pilot-Scale Experimental Verification for Predenitrification Process, J. Hamilton, R. Jain, P. An-toniou, S. A. Svoronos, B. Koopman and G. Lyberatos, EE Jan/Feb. 92, p38-55.

Nitrogen Removal at Baltimore's Back River WWTP, Robert J. Andryszak, Amarjit S. Sokhey, Jaswant S. Dhupar and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search Of Solutions, F. Pierce Linaweaver, ed., 1992), p617-622.

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

Operational Strategies for Predenitrification Process, R. Jain, G. Lyberatos, S. A. Svoronos and B. Koopman, EE Jan./Feb. 92, p56-67.

Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwillo and Rudy S. Chow, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p12-17.

Process Offers New Way to Control Nitrogen, CE June 992, p28-97.

92, p28-29.

Noise

Nalog Electronic Simulations of a Nonlinear System, R. Valery Roy and Eric Nauman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p668-671.

1992), p668-671.

Equivalence Between Motions with Noise-Induced Jumps and Chaos with Smale Horseshoes, Michael Frey and Emil Simiu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p660-663.

Noise Barrier Simulated by Rigid Screen with Back Wall, L. H. Huang and T. M. Kung, EM Jan. 92, p40-55.

Nonlinear System under Non-Gaussian Impulsive Noise Excitation, G. Q. Cai and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p18-151.

Tunneling in the Urban Environment, Norman A. Nadel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p172-180.

p172-180.

Updating Dynamic Models and Their Associated Uncertainties for Structural Systems, J. L. Beck and L. S. Katafygiotis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p681-684.

Noise control

Noise control
Minneapolis/St. Paul International (MSP) Part 150 Implementation Design Overview, Steven J. Vecchi, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p32-40.
Noise Barrier Simulated by Rigid Screen with Back Wall, L. H. Huang and T. M. Kung, EM Jan. 92, p40-55.

Noise measurement Aircraft Noise Monitoring at Denver International Air-port, Andrew S. Harris, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p41-48.

Music School Trumpets the Sounds of Silence, CE Mar. 92, p20,22.

Pile Driving Quietly Benefits Hotel, CE June 92, p95.

Aircraft Noise Monitoring at Denver International Air-port, Andrew S. Harris, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p41-48.

Nomographs
Analytical Hydraulic Modeling of Road Culverts, Rohin
S. Saleh and Ralph Hwang, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),

pv70-803. evelopment of Detached Breakwater Design Criteria Using a Shoreline Response Model, Julie Dean Rosati, Mark B. Gravens and Monica A. Chasten, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p814-829.

Flow in Trapezoidal Channels, W. E. Hart, B. P. Thore-son and S. A. Musil, IR Nov./Dec. 92, p971-976.

Nondestructive measurement
Concrete Surface Characterization Using Optical Metrology, Nora C. Sassenfeld and Michelle M. Crull, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p206-

A feasibility study for a Concrete Core Tomographer, A. M. Abdel-Ghaffar, R. M. Leahy, S. F. Masri and C. E. Synolakis, (Nondestructive Testing of Concrete Elements and Structures, Farbad Ansari, ed. and Stein Sture, ed., 1992), 937-48.

AASHTO Direct Structural Capacity Method Error Analysis, Ronald L. Baus and Andrew M. Johnson, TE Jan./Feb. 92, p20-32.

Airfield Pavement Creep Failure Investigation, John C. Potter, CF Aug. 92, p177-184.

The Application of Dynamic Modeling in the Nonde-structive Testing of Roads and Airfields, Mark Ander-son, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p321-335.

Concrete Beam Testing with Optical Fiber Sensors, D. Huston, P. Fuhr, P. Kajenski and D. Snyder, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1922), p60-69.

Condition Monitoring of Structures Using Transient Response, George Hearn, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p127-138.

Consistency and Reproducibility of Falling Weight Deflections, Christ van Gurp, (Road and Airport Pawment Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p291-305.

A Critique of the Ultrasonic Pulse Velocity Method for Testing Concrete, S. Popovics and J. S. Popovics, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p94-103.

Damage Assessment in Concrete Using Acoustic Emis-sion, C. Ouyang, E. Landis and S. P. Shah, (Nondestruc-tive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p13-24.

Dynamic Stiffness Analysis of Concrete Pavement Slabs, N. McCavitt, M. R. Yates and M. C. Forde, TE July/ Aug. 92, p540-556.

Elastic Wood Properties from Dynamic Tests and Com-puter Modeling, Sven Ohlsson and Mikael Perstorper, ST Oct. 92, p2677-2690.

Evaluation of Compressive Strength for High-Strength Concrete by Pulse Velocity Method, R. Sri Ravindrarajah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl

Evaluation of Concrete Bridges by Impact-Echo, Al Ghor-banpoor, Y. P. Virmani and G. R. Fatemi, (Nondestruc-tive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p82-93.

Fracture Surface Characterization of Concrete, M. A. Issa, A. M. Hammad and A. Chudnovsky, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130.

Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelps, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p519-531.

Integrity Testing of Concrete Elements Using Surface Waves, B. R. Bowen, J. M. Roesset and K. H. Stokoe, II., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p952-955.

Laboratory versus Nondestructive Testing for Pavement Design, William N. Houston, Michael S. Mamlouk and Rohan W. S. Perera, TE Mar./Apr. 92, p207-222.

sion Transducers, Douglas A. Bruttomesso and Laurence J. Jacobs, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p256-259. aser Interferometric Characterization of Acoustic Emis-

Learning to Love NDT, Bernard H. Hertlein, CE Jan. 92, p48-50.

Monitoring of Highway Pavements in Arizona Using Falling Weight Deflectometer, A. S. M. Mustaque Hosain and Larry A. Scoffeld, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p276-290.

A New NDT Device for Comprehensive Pavement Main-tenance (Theoretical Aspects), S. Nazarian and M. Baker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p948-951.

Nondestructive and Destructive Testing of a Three Span Skewed R. C. Slab Bridge, R. A. Miller, A. E. Aktan and B. M. Shahrooz, (Nondestructive Testing of Con-crete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p150-161.

Nondestructive Crack Identification by Acoustic Emission Analysis and Ultrasonic Frequency Response, Massyasu Ohtsu and Yasunori Sakata, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p171-181. Non-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1121-1128.

Nondestructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992, 0-87262-887-6, 235pp.

87262-887-6, 235pp.
On the Role of Experimental Mechanics in Assessing the Performance of Concrete, Stuart E. Swartz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl 19-122.
Passive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Concretes, Michael A. Taylor, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl-12.
Pavement Instrumentation for Verifying Elastic Theory, S. Nazarian, E. Y. Chai and D. R. Alexander, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p306-320.

Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p306-320.

Pullout Testing of High-Strength Concrete Members, Ronald L. Dilly and Michael Abshire, (Nondestractive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p194-205.

Quantitative NDE Technique for Assessing Damages in Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM July 92, p1468-1487.

Real-Time Condition Monitoring of Concrete Structures by Embedded Optical Fibers, Farhad Ansari, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p49-59.

Rigid-Pavement Evaluation Using NDT—Case Study, Jacob Uzan, TE July/Aug, 92, p527-539.

The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Failures: Thomas D. White, ed., 1992), p80-91.

Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p956-939.

Seasonal Soil Strength by Spectral Analysis of Surface Waves, Bernard D. Alkire, CR Mar. 92, p22-38.

Simulated Field Trials of Non-Destructive Concrete Test Methods for Highway Structures, John A. Bickley and Paul Read, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992, p162-170.

Soure, ed., 1972), p102-170.
Sonic NDE of Structural Concrete, Larry D. Olson, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p70-81.

Study of Three Dimensional Crack Tip Location of Mor-tar by Acoustic Emission, H. L. Chen and C. T. Chen, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p25-36.

A Theoretical Approach to Characterize Reinforced Concrete Using Stress Waves, J. S. Popovics, J. L. Rose and A. Pilarski, (Materials: Performance and Presention of Deficiencies and Failures, Thomas D. White, ed., 1992), 942-504.

13921, p492-304.
Tudor Road Rehabilitation, Anchorage, Alaska, T. S. Vinson, J. W. Rooney, H. Zhou and N. Coetzee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p397-414.

p397-414.
Use of X-Ray Computed Tomography in the Study of Marine Sediments, Thomas H. Orsi, Aubrey L. Anderson, John N. Leonard, William R. Bryant and Carl M. Edwards, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p968-982.
Wave Propagation in Solids, A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

Noalinear analysis
Analysis of Stability of L'Ambiance Plaza Lift-Slab Towers, Piotr D. Moncarz, Roy Hooley, John D. Osteraas
and Brant J. Lahnert, CF Nov. 92, p232-245.

Analysis of Thick Circular Plates Undergoing Large De-flections, M. Gorji, J. A. Abuyan and K. S. Y. Li, AS Jan. 92, p138-153. Arc-Length Method for Passing Limit Points in Structural Calculation, W. F. Lam and C. T. Morley, ST Jan. 92,

p169-185

Calculation, W. F. Lam and C. T. Moriey, ST Jan. 92, p169-185.

Axisymmetric Buckling of Pressure-Loaded Spherical Caps, Paulo B. Gonçalves and James G. A. Croll, ST Apr. 92, p970-985.

Buckling Analysis of Structures Composed of Tapered Members, Siu Lai Chan, ST July 90, p1893-1906.

Effect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p1796-1814.

Elastoplastic Nonlinear Analysis of Flexibly Jointed Space Frames, Faris G. A. Al-Bermani and Stritawat Kitipornchai, ST Jan. 92, p108-127.

Event-to-Event Strategy for Nonlinear Analysis of Truss Structures. I, A. Karamchandani and C. A. Cornell, ST Apr. 92, p893-909.

Finitie Element Modeling of Concrete Expansion and Confinement, F. J. Veochio, ST Sept. 92, p2390-2406.

Frame Buckling Analysis with Full Consideration of Joint Compatibilities, Yeong-Bin Yang and Shyh-Rong Kuo, EM May 92, p871-889.

The Generalized Brazier Problem for Orthotropic Straight Tubes of Finite Length, C. W. Bert and A. Libati, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p872-875.

Geomechanics of Subsidence Due to Pumping of Groundwater, Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1-26.

Geometric and Material Nonlinear Analysis of Thin-Walled Beam—Columns, J. L. Meek and W. J. Lin. ST

Geometric and Material Nonlinear Analysis of Thin-Walled Beam-Columns, J. L. Meek and W. J. Lin, ST June 90, p1473-1490.

Geometrical Imperfections on Inelastic Frame Behavior, Eric M. Lui, ST May 92, p1408-1415. Hypar Shell on Pasternak Foundation, D. N. Paliwal, S. N. Sinha and A. Ahmad, EM July 92, p1303-1316. Incorporating Load Sharing in Shear Wall Design of Light-Frame Structures, Bohumil Kasal and Robert J. Leicht, ST Doc. 92, p3350-3361.

Lenett, S. I. Dec. 42, p.3330-3361.

Nonlienar, Incremental Analysis of Olmsted Locks, Chris

A. Merrill and Sharon B. Garner, (Computing in Civil

Engineering and Geographic Information Systems Sym
posium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,

1992), p.921-928.

Nonlinear Analysis of Steel Space Structures, Ram Chandra, D. N. Trikha and Prem Krishna, ST Apr. 90, p898-909.

p898-909.

Nonlinear Analysis of Strain-Softening Damage under Monotonic and Cyclic Loading, Zdenek P. Bažant, Joško Ožbolt and Rolf Eligehausen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p490-493.

Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, Kuanchung J. Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p216-219.

Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, Loai El-Gazairly, Barry Goodno and James Craig. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p896-904.

Nonlinear Finite-Element Model for Light-Frame Stud

Nonlinear Finite-Element Model for Light-Frame Stud Walls, B. Kasal and R. J. Leichti, ST Nov. 92, p3122-

3135.

Nonlinear Free Vibration of Laminated Composite Plates, Alavandi Bhimaraddi, EM Jan. 92, p174-189.

Nonlinear Geometric and Material Considerations in Shell Structures, S. A. Schimmels and A. N. Palazotto, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p548-551.

Nonlinear Stability of Differential Surge Chambers, Xiao-Liang Yang and Chen-Shan Kung, HY Nov. 92, p1526-1539.

p1526-1539.

Nonlinear Structural Analysis on a Distributed System, Eric M. Lui and Fred H. Schlereth, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p647-654.

Optimal Design of Structures with Kinematic Nonlinear Behavior, S. Pezeshk, EM Apr. 92, p702-720.

Prebuckling Deflections and Lateral Buckling. J: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Applications, Yong Lin Pi and N. S. Trahair, ST Nov. 92 p.2967-2985.

Predicting Behavior of Cyclically Loaded RC Structures, William K. Rule and Robert E. Rowlands, ST Feb. 92,

Propagation of Long Waves Onto Shelf, Derek G. Goring and Fredric Raichlen, WW Jan./Feb. 92, p43-61.

Reliability of Geometrically Nonlinear PR Frames, Achintya Haldar and Yiguang Zhou, EM Oct. 92, p2148-2155.

Seismic Performance of Fixed-Base and Base-Isolated Steel Frames, A. N. Lin and H. W. Shenton, III., EM May 92, p921-941.

Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-

Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p539-542.

Stiffness Expressions for Element with Central and End Springs, R. E. McConnel and A. I. El-Sheikh, ST Apr. 92, p955-969.

Stiffness Matrix for Nonlinear Analysis of Thin-Walled Frames, Aura Conci, EM Sept. 92, p1859-1875.

Tuned Liquid Damper (TLD) for Suppressing Horizontal Motion of Structures, Yozo Fujino, Limin Sun, Benito M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p2017-

Nonlinear differential equations

Nonlinear Free Vibration of Laminated Composite
Plates, Alavandi Bhimaraddi, EM Jan. 92, p174-189. Nonlinear Modeling of Truss-Plate Joints, Leslie Groom and Anton Polensek, ST Sept. 92, p2514-2531.

Postbuckling of Polar Orthotropic Circular Plates— Retrospective, Archibald N. Sherbourne and Mahesh D. Pandey, EM Oct. 92, p2087-2103.

Microcomputer Analysis of Guyed Towers as Lattices, Raja R. A. Issa and R. Richard Avent, ST Apr. 91, p1238-1256.

Model for Optimal Design of Reinforced Concrete Beam, B. K. Chakrabarty, ST Nov. 92, p3238-3242.

Multiple Subregion Allocation Models, Salah Benabdal-lah and Jeff R. Wright, UP Mar. 92, p24-40.

Quasi-Three-Dimensional Optimization Model of Jakar-ta Basin, Brad A. Finney, Samsuhadi and Robert Willis, WR Jan./Feb. 92, p18-31.

Simultaneous Design and Control of Stiffened Laminated Composite Structures, Luis Mesquita and Manohar P. Kamat, AS Jan. 92, p111-126.

Measured and Simulated Response of a Small Semisub-mersible Moored in Deep Water, Robert F. Zueck, Stuart F. Pawsey and Steve J. Leverette, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p114-128.

Using the Mode Superposition Method, Mohamed W. Fahmy and Ahmad H. Namini, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p457-460.

Nonlinear Impulsive Motions of Low-Tension Cables, Michael S. Triantafyllou and Christopher T. Howell, EM Apr. 92, p807-830.

Parametric and External Excitation of Marine Risers, S. K. Thampi and J. M. Niedzwecki, EM May 92, p942-

Reduced Basis Technique for Nonlinear Vibrations of Composite Panels, Ahmed K. Noor, C. M. Andersen and Jeanne M. Peters, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883.

Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079.

Stochastic Dynamics of Hysteretic Systems, Lucia Faravelli and Paolo Venini, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p33-56.

Adaptive and Parallel Methods for Nonlinear Solid Mechanics, T. Belytschko, L. P. Bindeman, H. Y. Chiang, E. J. Plaskacz and I. S. Yeh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p27-41.

Analog Electronic Simulations of a Nonlinear System, R. Valery Roy and Eric Nauman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 9668-671.

Analysis of Circular RC Columns for Short- and Long-Term Deformations, Mark Andrew Bradford and R. Ian Gilbert, ST Mar. 92, p669-683.

hand Citioert, 31 Mar. 92, poor-063.

Analytical Methods for the Determination of Correlations and Spectra of Nonlinear System Response, R. Valery Roy and Pol D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p412-415.

Branch Switching in Bifurcation of Structures, Fumio Fujii and Kok Keong Choong, EM Aug. 92, p1578-1596.

Control of Hysteretic System Using Velocity and Acceleration Feedbacks, J. N. Yang, Z. Li and S. C. Liu, EM Nov. 92, p2227-2245.

Design of RC Sections with Generic Shape under Biaxial Bending, Andrea Dall'Asta and Luigino Dezi, ST Apr. 92, p1138-1143.

24. p1138-1143.
Dynamic Behavior of Nonlinear Cable System. I. S. Mesarovic and D. A. Gasparini, EM May 92, p890-903.
Dynamic Behavior of Nonlinear Cable System. II, S. Mesarovic and D. A. Gasparini, EM May 92, p904-920.
Equivalent Linearization for Seismic Responses. I: Formulation and Error Analysis, Young J. Park, EM Nov. 92, p2207-2226.

92, p2207-2226.
 Equivalent Statistical Quadratization of Nonlinear Hydrodynamic Loads on TLPs, Ahsan Kareem and Yousun Li, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p890-905.
 Fracture Toughness Model of Fiber Reinforced Ceramics, Asher A. Rubinstein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p232-235.
 Inflation Lotability of Collindical Membranes. Boosing

Inflation Instability of Cylindrical Membranes, Baoqing Yu, William A. Nash and Thomas J. Lardner, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p916-919.

In-Plane Non-Linear Random Vibration of Composite Plates, Ronald S. Harichandran and Ahmad Hawwari, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p188-191.

Intermittent Kinematics for Nonlinear Random Waves Near Ocean Surface, Sau-Lon James Hu and Dongsheng Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), ppl.

Nonlinear Diffraction of Random Waves by a Vertical Cylinder, Ahsan Kareem, C. C. Hsieh and A. N. Williams, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p459-

Nonlinear Soil-Pile Interaction Model for Dynamic Lat-eral Motion, Toyoaki Nogami, Jun Otani, Kazuo Konagai and Hsiao-Lian Chen, GT Jan. 92, p89-106.

Nonlinear System under Non-Gaussian Impulsive Noise Excitation, G. Q. Cai and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p148-151.

Numerical Solution of the Transient Fokker-Planck Equation: The Movie, L. A. Bergman and B. F. Spen-cer, Jr., (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p519-522.

On the Approximated Solution of Non-Linear Systems Under Non Gaussian Excitations, G. Falsone and M. Vasta, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p140-143.

otechnical Reliability, Y. K. Lin, ed., 1992), p140-143.
Polynomial Chaos for Nonlinear Random Vibration, R. Ghanem and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p404-407.
Pseudoforce Method of Solution for Highly Nonlinear Systems, Satish Nagarajaiah and Andrei Reinhorn, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p913-920.

Reliability of Nonlinear Frame Structures by SFEM, Achintya Haldar and Yiguang Zhou, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p336-339.
Responses of Nonlinear Oscillators Excited by Non-Gaussian Pulse Processes, Sau-Lon James Hu, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p144-147.
Second-Order Hydrodynamic Interactions Between a Pair

Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188. 202

202.
A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradiwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p69-72.
Simulation of Nonlinear Wave Runup on Steep Impermeable Stopes, A. N. Williams, W. G. McDougal, S. Zhang and S. N. Stevenson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p203-217.
Stochastic Finite Elements and Reliability Analysis, Lucia Faravelli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p35-48.

p45-48.

Stochastic Response of a Caster-Mounted System, Michael A. Moser and Wilfred D. Iwan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p316-319.

Wave Exciting Forces on a Platform Fixed in Nonlinear Shallow Water Waves, Gregory S. Hook, Cheung H. Kim and Erick Huang, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p311-325.

Non-Newtonian fluids

Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, Kuanchung J. Lin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p216-219.

Nonpoint pollution

Nonpolnt pollution
Agricultural Impacts on Surface Water via Ground
Water, William L. Magette, Adel Shirmohammadi,
James D. Wood and Theodore H. Ifft, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p407-412.
ASCE Policy Group Counsels EPA on Coastal Pollution,
CE Mar. 92, p76-77.

CE Mar. 92, p76-77.
Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G, Balog, William P, Stack, Kenneth T. Belt and Nathan J. Bell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503.
Controlling Nitrogen in Coastal Waters, Rosemary Monahan, Susan Beede, Joseph Costa and Bruce Rosinoff, CE Mar. 92, p56-59.

Delaware Estuary Nonpoint Source Control Program, William Whipple, Jr. and Van Dyke Polhemus, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p718-723.

Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p25.

Seuren of Sontitions, Ted Engman, ed., 1992), p25.

Expert System for Agricultural and Water Quality Management, William L. Magette and Adel Shirmohammadi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p442-447.

Land Use and Imperviousness Information Acquisition, Ming T. Lee, (Hydraulie Engineering: Saving a Threat ened Resource—In Search of Solutions, Marshall Jen nings, ed. and Nani G. Bhowmik, ed., 1992), p363-368.

Management of Agricultural Drainage Pollution Considering Regional Cooperation, T. C. Lyons and M. E. Grismer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p448-455.

ed., 1992), p448-455.
Modeling Nutrient Loadings from Croplands in the Chesapeake Bay Watershed, Anthony S. Donigian, Jr. and Avinash S. Patwardhan, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p817-822.

Modeling Variable Width Buffer Zones with a Geographic Information System, Gary Ostroff, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p213-218.

dovement of Nonpoint-Source Contaminants Through Heterogeneous Soils, John C. Tracy, IR Jan/Feb. 92, p88-103.

p88-103.

Non-Point Source Pollution Due to Runoff Over Sandy Soil, D. Payne, C. Richardson, A. D. Parr and K. Janish, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p439-444.

Partitioning Phosphorus Loads: Implications for Lake Restoration, Thomas M. Heidtke and Martin T. Auer, WR Sept./Oct. 92, p562-579.

Percentions Sensitivity and Solutions: Water Onality.

Perceptions, Sensitivity, and Solutions; Water Quality 2000, John B. Pearce, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-43.

Proposed EPA Regulations Worry Marina Industry, CE Feb. 92, p27.

Quantity and Quality of Nuisance Water in the Las Vegas Valley, Steve A. Mizell and Richard H. French, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p128-132.

Rehabilitating Irrigation Systems with USDA Water Quality Programs, John D. Hedlund, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293.

Sensitivity of Non-Point Source Pollution Controls to Land Use, Oner Yucel and David W. Blaha, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., Statemick, MSS M.

Statewide NPS Management Strategies, William Whip-ple, Jr., Vincent H. Berg and Eric H. Livingston, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p843-848.

mad Karamouz, ed., 1992), p843-848.
Urban Nonpoint Source Control Strategies Outside North America, Wayne C. Huber, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p617-622.
Usefulness of Low-Cost Watershed Monitoring: A Case Study, James G. Turek and David W. Blaha, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p712-717.
Water Ouality, Management Planning—Bird River, Wa-

Water Quality Management Planning—Bird River Watershed, Alan Cavacas, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101.

Nonproportional loading

Nonproportional lossing
Comparative Evaluation of Plasticity Theories against
Tension-Torsion Test at Finite Strain, Ali H. AlGadhib and Kerry S. Havner, EM Oct. 92, p2104-2126.

Variation of Velocity Distribution along Nonuniform Open-Channel Flow, Chao-Lin Chiu and David W. Murray, HY July 92, p989-1001.

Velocity Distribution Inside and Above Branched Flexi-ble Roughness, Omnia El-Hakim and Mohamed M. Sa-lama, IR Nov./Dec. 92, p914-927.

formal stres

Stability Analysis of an Earth Slope, T. William Lambe and Francisco Silva-Tulla, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p27-69.

North Sea Uncertainty and Reliability Analysis of Jacket Platform, A. Olufsen, B. J. Leira and T. Moan, ST Oct. 92, p.2699-2715.

Norway

Norway's Olympic Cavern, Rajinder Bhasin and Fredrik Leset, CE Dec. 92, p60-61.

Notches

Design of Notched Wood Beams, Greg C. Foliente and Thomas E. McLain, ST Sept. 92, p2407-2420.

Nuclear density meters
An Intrusive Fluid Mud Surveying System, Allen Teeter,
Glynn Banks, Michael Alexander and Andrew Salkield,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p1012-1017.
Variability in Compaction Control, Iraj Noorany, GT
July 90, p1132-1136.

July 90, p1132-1136.

Nuclear electric power generation
Development of Radioactive Waste Management Licensing Review Assistant, Wei-Whua Loa, Suan Chen, Wei-Chu Yu, Chao-Ming Pong, Ching-Lun Huang and Chen Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p243-249.

Experience With an Educational Package on Radioactive Waste Management in a Country Having no Nuclear Power Programme, P. Kreisa and G. Ehrenstrasser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1491-1493.

Ontario Hydro's Plan for Used Nuclear Fuel, P. D. Stevens-Guille, H. A. Howes and J. Freire-Canosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p250-235.

Nuclear energy
Ecological Sustainable Development—A Place in the Sun
for Nuclear Energy? Carole Palmer, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992), p1470-1477

p)1470-1477.

In-House Training, Formal Education and Public Outreach, Yolanda A. Willis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p)190-2201.

An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Century: Beyond Engleberg, Richard R. Powell, Edwyn James and Alfred Wohlpart, (High Level Radioactive Waste Management Program Committee, 1992), p)1494-1498.

Overview of the Radioactive Waste Management Programme of the OECD/NEA, Jean-Pierre Olivier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p52-56.

Phobias and Underutilization of University Scientists: A Suggested Program, York T. Mandra, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1799-1806.

nderstanding the Medical Applications of Radionu-clides, Darrell W. McIndoe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1478-1484.

Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1478-1484.

Nuclear fael cycle
Behaviour of Used CANDU Fuel Stored in 150°C Moisture-Saturated Air, K. M. Wasywich and C. R. Frost, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1166-1173.

Canadian High-Level Radioactive Waste Management System Issues, C. J. Allan, B. R. Gray and P. D. Stevens-Guille, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p11-17.

Cleanup of a HLW Nuclear Fuel Reprocessing Center Using 3-D Database Modeling Technology, Robert C. Sauer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p859-868.

Convective Heat Transfer in Spent Fuel Canisters, M. Keyhani and F. A. Kulacki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p773-778.

Criticality Safety and Shielding Design Issues Related to Transport Cask Design, Alan H. Wells, (High Level Radioactive Waste Management Program Committee, 1992), p713-178.

Criticality Safety and Shielding Design Issues Relation to Transport Cask Design, Alan H. Wells, (High Level Radioactive Waste Management Program Committee, 1992), p715-1715.

Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 101 to Other Waste Management Program Committee, 1992), p715-718.

Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 191 to Other Wastes, Neil J. Numark and Suzanne R. Phelps, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1074-1081.

Experience with NRC Licensing of a Dual Purpose Cask, Ivan Stuart, Todd Lesser and Marvin Smith, High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1231-1235.

Extended-Life Nuclear Waste Package Utilizing Redundant Corrosion/Containment Barriers, F. E. Goodwin and R. E. Westerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1681-1686.

Facility Interface Capability Assessment, Thomas E. Pol-log, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p178-182.

The High Level Radioactive Waste Management Program in Japan, Aiji Yamato, Sumio Masuda and Hideki Sakuma, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p41-48.

Interpolation Functions for Use with ORIGEN-2 Data, R. S. Moore, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p77-81.

gram Committee, 1752, p.17-01.

Occurrence of Metallie Phases in Spent Nuclear Fuel: Significance for Source Term Predictions for High-Level
Waste Disposal, English C. Pearcy and Hersh K.
Manaktala, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p131-136.

On the Particle Size Distribution of Crushed Spent Fuel, P. C. Reardon, Y. R. Rashid and G. S. Brown, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p137-142.

On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, David Lewis Feldman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p143-151.

Ontario Hydro Used Fuel Transportation Assessment, L. Grondin, D. Ribbans and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1209-1215.

ORIGNATE: PC Input Processor for ORIGEN-S, Stephen M. Bowman, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p88-92.

ment Program Committee, 1992), p88-92.
Overview of ORIGEN2 and ORIGEN-S: Capabilities and
Limitations, C. V. Parks, (High Level Radioactive
Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p57-64.
Oxidation of Spent Fuel in Air at 175' to 195'C, R. E. Einziger, L. E. Thomas, H. C. Buchanan and R. B. Stout,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1449-1457.

Partitioning and Transmutation of Long-Lived Fission Products, J. A. Rawlins, D. W. Wootan, R. A. Karnesky, F. M. Mann and W. W. Schulz, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl711-1717.

A PC-Based Discrete Event Simulation Model of the Civilian Radioactive Waste Management System, G. L. Airth, J. W. Nehls and D. S. Joy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1317-1323.

Preclosure Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. Johansen, L. Grondin and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p481-488.

Probabilistic Assessment of Spent-Fuel Cladding Breach, H. Foadian, Y. R. Rashid and K. D. Seager, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1018-1025.

Reactivity End-Effects Estimates Using A K<sub>∞</sub> Perturba-tion Model, Charles R. Marotta, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2165-2173.

Return to Italy of Vitrified High Level Wastes from U.K.:
Operational and Regulatory Aspects, G. F. Eletti, F. P.
Michetti and M. Tocci, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p256-262.

The Role of ORIGEN-S in the Design of Burnup Credit Spent Fuel Casks, M. C. Brady, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p65-

71.
A Spacer Grid Hysteretic Model for the Structural Analysis of Spent Fuel Assemblies Under Impact: SAND91-2528C, TTC-1114, Peter R. Barrett, I. Kurkchubasche and Kevin D. Seager, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2249-2254.
Spanish High Level Radioactive Waste Management System Issues, J. M. Espejo and A. R. Beceiro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p18-24.
Spent Evel Characteristics Potentially Relevant to Report

Spent Fuel Characteristics Potentially Relevant to Repository Design Assessment, Michael G. Bale and Thomas A. Thomton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p116-121.

Spent Fuel Characteristics Provided by the CDB—An Update, K. J. Notz, R. Salmon, T. D. Welch, W. J. Reich and R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p122-130.

Throughput Study for the Civilian Radioactive Waste Management System, Peter Gottlieb, William Bailey, Ill., Flora Emami, Lawrence M. Ford and John F. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1349-1358.

Using the ORIGEN2 Computer Code for Near Core Activation Calculations, A. T. Luksic and B. D. Reid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 982-87.

Utilization of ORIGEN2 by the Characteristics Data Base, Tim D. Welch and Karl J. Notz, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-

## Nuclear fusio

INTERLUNE Concept for Helium-3 Fusion Develop-ment, Harrison H. Schmitt, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p804-

1614.
Isotopic Separation of <sup>3</sup>He/<sup>4</sup>He From Solar Wind Gases Evolved from the Lunar Regolith, William R. Wilkes and Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.

Application of NMR to Rotating Granular Flow, M. Nak-agawa and E. K. Jeong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p644-647.

Nuclear power plants
The ACR Issue Resolution Process, David K. Zabransky,
Michael S. Alissi and Michael H. Schwartz, (High Level
Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),
arXiv:1721.172 p173-177

Actinide Recycle and Waste Management, Marion L. Thompson and Ira N. Taylor, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 368-1372.

Management Program Committee, 1992, p. 1906-1374.
Application of NUHOMS\* to an Integrated MRS/
Transportation System, J. M. Rosa, R. A. Lehnert and
R. D. Quinn, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 196-200.

Democracy and Expertise: The Story of Ringhals 3 in Sweden, Göran Sundqvist, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p166-172.

Design of Floating Stone Columns in Hydraulic Fill, Raymond A. DeStephen, David W. Kozera and Frank J. Swekosky, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p829-841.

Development of a Demonstration Program for a Dry Cask-to-Cask Transfer System with Dual Purpose Casks, Rita W. Bower and Robert E. Jones, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p.2212-2218.

Experience With an Educational Package on Radioactive Waste Management in a Country Having no Nuclear Power Programme, P. Krejsa and G. Ehrenstrasser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Combustion and Country Waste Management Program Committee, 1992), p1491-1493.

Experience with Spent Fuel Storage Licensing, Frederick C. Sturz, Ralph H. Sievers and John R. Stokley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p220-227.

Factoring in the Human Factor, CE Sept. 92, p11.

The German Cask-Concept for Intermediate and Final Storage of Spent Fuel, K. Janberg, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p385-394.

Housing Chernobyl Relocatees, William H. Claire, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p19-28.

Managing Large Complex Projects, William B. Derrick-son, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1751-1757.

mittee, 1992), pl751-1757.
Managing the High Level Waste Nuclear Regulatory
Commission Licensing Process, Kenneth P. Baskin,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p691-694.
MRS Using a FUELSTORMT Vault, M. K. Valentine
and H. Günther, (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), p1875-1882.

Phobias and Underutilization of University Scientists: A Suggested Program, York T. Mandra, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1799-1806.

Plutonium in Uranium Deposits: Natural Analogues of Geologic Repositories for Plutonium-Bearing Nuclear Wastes, David Curtis, June Fabryka-Martin, Ruben Aguilar, Moses Attrep, Jr. and Fred Roensch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p338-344.

Review of NPP Concrete Degradation Factors and Assessment Methods, T. M. Refai and M. K. Lim, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992),

tures, Far p182-193

Start-Ups, CE Feb. 92, p12.

Status of Infrastructure Studies and Results, Michael Conroy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p183-189.

Swedith High-Level Radioactive Waste Management Issues, Per-Eric Ahlström, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p33-40.

Management riogram Committee, 1992), p53-94. Understanding Nuclear Waste Management Within a Global Framework, R. R. Powell, M. Robinson and W. Pankratius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1465-1469.

Use of Density Current to Modify Thermal Structure of TVA Reservoirs, Vahid Alavian and Pete Ostrowski, Jr., HY May 92, p688-706.

Validation, Acceptance and Licensing: How Much Scientific Facts Can the Process Digest? Clas-Otto Wene, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p110-115.

Validation of System Models of Deep Geological Dispos-al of High-Level Nuclear Waste, Bjorn T. Cronhjort and Grant Sheng, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p2122-2125.

The Behavior and Effects of the Noble Metals in the DWPF Melter System, Nick D. Hutson and Mike E. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p541-548.

The ACR Issue Resolution Process, David K. Zabransky, Michael S. Alissi and Michael H. Schwartz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p173-177.

Actinide Recycle and Waste Management, Marion L. Thompson and Ira N. Taylor, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1368-1372.

Application of NUHOMS\* to an Integrated MRS/ Transportation System, J. M. Rosa, R. A. Lehnert and R. D. Quinn, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p196-200.

Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. L. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

Canadian High-Level Radioactive Waste Management System Issues, C. J. Allan, B. R. Gray and P. D. Stevens-Guille, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p11-17.

A Comparison of Radionuclide Inventories Between the Companion of Audohucine Inventories Between the Direct-Disposal and the Acinide-Burning Cycles, Jor-Shan Choi, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), pl 381-1386.

Convective Heat Transfer in Spent Fuel Canisters, M. Keyhani and F. A. Kulacki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p773-778.

Criticality Safety and Shielding Design Issues Related to Transport Cask Design, Alan H. Wells, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p2151-2155.

Democracy and Expertise: The Story of Ringhals 3 in Sweden, Göran Sundqvist, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p166-172.

Development Status of the GA-4 and GA-9 Casks, Robert M. Grenier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1832-1838.

An Evaluation of Early Application of the Transuranic Burning Concept, E. Rodwell, R. A. Shaw and R. F. Williams, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1373-1380.

International Status of Dry Storage of Spent Fuels, K. J. Schneider, S. J. Mitchell and A. B. Johnson, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1159-1165.

Interpolation Functions for Use with ORIGEN-2 Data, R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p77-81.

gram Committee, 1726, p.17-01.

Isotopic Separation of <sup>3</sup>He/<sup>4</sup>He From Solar Wind Gases

Evolved from the Lunar Regolith, William R. Wilkes
and Layton J. Wittenberg, (Engineering, Construction,
and Operations in Space III, Willy Z. Sadeh, ed., Stein

Sture, ed. and Russell J. Miller, ed., 1992), p547-554.

Lessons Learned from Utility NRC Licensing Experience, Jay E. Silberg, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p679-684.

Materials Testing Aspects of the Problem of the Chernobyl NPP 4th Unit's High-Level Radioactive Products Burial, E. B. Anderson, B. E. Burakov and E. M. Pasukhin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p. 2395-2398.

MRS Using a FUELSTOR<sup>MT</sup> Vault, M. K. Valentine and H. Günther, (High Level Radioactive Waste Management Program Committee, 1992), p.1875-1882.

An ORIGENZ Updage for PCs and Mainframes. Scott B.

An ORIGEN2 Update for PCs and Mainframes, Scott B. Ludwig, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p93-98.

ORIGNATE: PC Input Processor for ORIGEN-S, Stephen M. Bowman, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p88-92.

ment Program Committee, 1992), p88-92.

Overview of ORIGEN2 and ORIGEN-S: Capabilities and Limitations, C. V. Parks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p57-64.

Oxidation of Spent Fuel in Air at 175' to 195'C, R. E. Enziger, L. E. Thomas, H. C. Buchanan and R. B. Stout, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1449-1457.

Partitioning of Aqueous High-Level Wastes: State-of-the-Art Technology, Wallace W. Schulz, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1718-1723.

pt/16-1/23.

Containing LWR Spent Fuel or Partitioned/
Transmuted Nuclear Waste, R. W. Barnard and W. W.-L. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1397-1403. Performance-Ass

pram Committee, 1992), pl 397-1403.
Preliminary Assessment of the Benfits of Derating a Cask for Increasing Age/Burmup Capability, B. L. Broadhead, C. V. Parks, D. S. Joy and J. S. Tang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2182-2189.

Reactivity End-Effects Estimates Using A K<sub>∞</sub> Perturba-tion Model, Charles R. Marotta, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2165-2173.

Releases From Exotic Waste Packages from Partitioning and Transmutation, William W.-L. Lee and Jor-Shan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1387-1396.

Scale Model to Test Advanced Nuclear Reaction, CE Mar. 92, p22,26.

Shipping Cask Development Loaded 4 PWR Fuel Assemblies, H. Y. Kang, J. C. Lee and S. G. Ro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Spanish High Level Radioactive Waste Management Sys-tem Issues, J. M. Espejo and A. R. Beceiro, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

Spent Fuel Characteristics Potentially Relevant to Repos-itory Design Assessment, Michael G. Bale and Thomas A. Thornton, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992., p116-121.

Status of Infrastructure Studies and Results, Michael Conroy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p183-189.

Swiss High-Level Radioactive Waste Management Sys-tem Issues, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p25-27.

management Program Committee, 1992), p25-27.
Using the ORIGEN2 Computer Code for Near Core Activation Calculations, A. T. Luksic and B. D. Reid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p82-87.

Utilization of ORIGEN2 by the Characteristics Data Base, Tim D. Welch and Karl J. Notz, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-

Nuclear safety
ALWP-67: A Little-Known Big Nuclear Accident, N. G.
Botov, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p2331-2338.

Committee, 1992, p2331-2338.

High Level Radioactive Waste Management Program Committee, 1992), p2331-2338.

Current Perspectives on Performance Assessment at the NRC, S. M. Coplan, N. A. Eisenberg, M. V. Federline and John D. Randall, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2145-2150.

The Impact of Risk Communications on Public Understanding: Combining a Survey with an Experiment, R. E. O'Connor and R. J. Bord, (High Level Radioactive Waste Management Program Committee, 1992), p574-581.

In-House Training, Formal Education and Public Outreach, Yolanda A. Willis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p1281-1286.

Towards Confidence in Transport Safety: Demonstrating an Extraordinary Safety Program, R. W. Robison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1281-1286.

mittee, 1992), p1921-1926.

Nuclear wastee disposal

The ACR Issue Resolution Process, David K. Zabransky,
Michael S. Alissi and Michael H. Schwartz, (High Level
Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),
p173-177.

Alternate Conceptual Model of Ground Water Flow at
Yucca Mountain, Linda L. Lehman, (High Level Radioactive
Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p310-320.

waste Management, High Level Radioactive Waste Management Program Committee, 1992), p310-320.
Application of NUHOMS\* to an Integrated MRS/ Transportation System, J. M. Rosa, R. A. Lehnert and R. D. Quinn, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p196-200.
Application of Results from the Poços de Caldas Project in the Kristallin-I HLW Performance Assessment, I. G. McKinley, W. R. Alexander, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Applications of Performance Assessment in Support of the Exploratory Studies Facility (ESF) Design, M. E. Fewell, S. R. Sobolik, J. H. Gauthier, L. E. Shephard and L. S. Costin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670.

ASME Pressure Vessel Code Application to Nuclear Waste Container Design, Mohamed B. Trabia and Mark Kiley, (High Level Radioactive Waste Management Program Committee, 1992), p1244-1252.
The Behavior and Effects of the Noble Metals in the DWPF Melter System, Nick D. Hutson and Mike E. Smith, (High Level Radioactive Waste Management Program Committee, 1992), p541-548.
Behaviour of Used CANDU Fuel Stored in 150°C Moisture-Saturated Air, K. M. Wassywich and C. R. Frost, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1166-1173.
Benefits of International Technical Collaboration, Thomas H. Isaacs, (High Level Radioactive Waste Management, High Level Radioactive Wa

mittee, 1992), pl166-1173. Benefits of International Technical Collaboration, Thomas H. Issacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32. Canadian High-Level Radioactive Waste Management System Issues, C. J. Allan, B. R. Gray and P. D. Stevens-Guille, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p11-17.

Characterization of the Topopah Spring and Tiva Canyon Tuffs at Yucca Mountain, Ajeet Singh, Shamsuddin Ilias and Gary Tatterson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1953-1958.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1026-1039.

Comparison of Two Conceptual Models of Flow Using the TSA, Michael L. Wilson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p882-890.

Computer-Aided Characterization of Wellfield-Testing Results in Basalts, J. A. Paschis, J. R. Kunkel and T. D. Steele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p475-480.

Considerations in Managing the Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. W. Dormuth, P. A. Gillespie and S. H. Whitaker, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pj 137-1742.

Convective Heat Transfer in Spent Fuel Canisters, M. Keyhani and F. A. Kulacki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p773-778.

Corrosion Lifetime Assessment for Candidate Materials of Geological Disposal Overpack for High-Level Nuclear Waste Canisters—Perspective of R&D in Japan, Hidekazu Asano, Hisao Wakamatsu and Masatsune Akashi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1658-1669.

Coupled Heat and Moisture Transport Model for Underground Climate Prediction, G. Danko and P. MousserJones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 979-798.

Critical Stresses in Pintle, Weldment and Top Head of Nuclear Waste Container, Samaan G. Ladkany and Brett R. Kniss, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1253-1260.

A Decision Analysis of an Exploratory Studies Facility, M. W. Merkhofer and P. Gnirk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p650-656.

Decision Management for the Hanford Environmental Dose Reconstruction Project, William J. Roberds, H. A. (Walt) Haerer and Detlof von Winterfeldt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1743-1750.

Demands Placed on Waste Package Performance Testing and Modeling by Some General Results of Reliability Analysis, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p994-1002.

Democracy and Expertise: The Story of Ringhals 3 in Sweden, Göran Sundqvist, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p166-172.

Design and Construction of Two Major Experiments at the URL, P. M. Thompson, B. H. Kjartanson and R. S. Read, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1082-1089.

Design and Licensing of the VSC Dry Fuel Storage System, Art J. McSherry, John V. Massey and Boris A. Chechelnistsy, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1216-1220.

Program Committee, 1992, pp.210-120.

Besign Management and Stress Analysis of a Circular Rock Tunnel and Emplacement Holes for Storage of Spent Nuclear Fuel, Nadia Kandalañ-Ladkany and Richard V. Wyman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2260-2266.

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1972-1985.

370

piy/2-1984.
Deterministic and Probabilistic Performance Assessment Methods Applied to Radionuclide Migration Through Fractured Geologic Medium, A. B. Gureghian, Y.-T. Wu and B. Sagar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p985-993.

Program Communet, 1972, pp. 30-373.

Deterministic Geologic Processes and Stochastic Modeling, Christopher A. Rautman and Alan L. Flint, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl617-1624.

System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p846-851.

Development of Functional Requirements for a Monitored Retrievable Storage Installation, M. A. Duffy, T. A. Mozhi, P. N. Kumar and W. A. Lemeshewsky, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1867-1874.

Development Status of the GA-4 and GA-9 Casks, Robert M. Grenier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1832-1838.

gram Committee, 1992), p1832-1838.
Diffusion of Carbon Dioxide and Iodine Through Yucca
Mountain Tuffs—Effects of Temperature and Moisture Content, Tevifs Bardakic, Franklin G. King and
Aject Singh, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1946-1952.

Dissolution Rates of As-Received and Partially Oxidized Spent Fuel, W. J. Gray and L. E. Thomas, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1458-1464.

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels, J. S. Grant, P. M. Boocock and C. J. Ealing, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2227-2234.

Dynamic Compaction of Nuclear Waste, Cliff Schennayder and Robert G. Lukas, CE Mar. 92, p64-65.

Early Evaluation of the Suitability of the Yucca Mountain Site, Jean L. Younker, Larry D. Rickertsen and Bruce R. Judd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p517-524.

Frogram Committee, 1992, p311-224.

Economic Impact of Nuclear Facilities, Eric Knox and Scott Burnison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p349-953.

Education: Gateway to the Solution, Ginger P. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10.

Level Radioactive Waste Management Program Committee, 1992, pd-10.
Effect of Solid-Phase Selectivity on Sorption of Cobalt and Strontium by Zeolitized Tuff, M. Gopala Rao, P. C. Das, E. U. Honga and A. E. Helou, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1587-1592.

Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, M. Pechs and K. Einfeld, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p.1181-1187.

Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, K. J. Riggle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2323-2336.

Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 191 to Other Wastes, Neil J. Numark and Suzanne R. Phelps, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1074-1081.

Estimating the Consequences of Significant Fracture Flow at Yucca Mountain, John H. Gauthier, Michael L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Evaluations of Glass Vitrification Techniques on Iron Ratio Determinations, R. B. Spencer, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Waste Man p2399-2405.

Experience with NRC Licensing of a Dual Purpose Cask, Ivan Stuart, Todd Lesser and Marvin Smith, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1231-1235.

Experience with Spent Fuel Storage Licensing, Frederick C. Sturz, Ralph H. Sievers and John R. Stokley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p220-227.

1992, p.2.0-2.27.
Extended-Life Nuclear Waste Package Utilizing Redundant Corrosion/Containment Barriers, F. E. Goodwin and R. E. Westerman, (High Level Radioactive Waste Management Program Committee, 1992), p1681-1686.

Facility Interface Capability Assessment, Thomas E. Pol-log, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p178-182.

Field Research Program for Unsaturated Flow and Transport Experimentation, V. C. Tidwell, C. A. Rautman and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p704-709.

Flow and Transport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, In Che Yang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p732-737.

Fracture Grouting with Bentonite Slurries, C. Ran and J. J. K. Daemen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p360-371.

rench High-Level Waste Management Research and Development Program, J. P. Moncouyoux and C. G. Sombret, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409.

Committee, 1992), p2406-2409.
Geochemical Evidence for Waning Magmatism and Polycyclic Volcanism at Crater Flat, Nevada, Frank V. Perry and Bruce M. Crowe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2356-2365.
Geochemical Model for <sup>14</sup>C Transport in Unsaturated Rock, Richard B. Codell and William M. Murphy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1959-1965.
Geochectical Tomogramby Model Studies Balated to No.

Geoelectrical Tomography: Model Studies Related to Nuclear Waste Site Characterization, Thomas E. Owen and Vernon R. Sturdivant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p304-307.

The German Cask-Concept for Intermediate and Final Storage of Spent Fuel, K. Janberg, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p385-394.

Graphical Models for Simulation and Control of Robotic Systems for Waste Handling, William D. Drottning and Phil C. Bennett, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p974-979.

Graphics-Based Site Information Management at Han-ford TRU Burial Grounds, Samuel R. Rod, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

p450-457.

Hanford Defense Waste Separation Options, B. A. Wolfe, W. B. Barton and D. G. Sutherland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1701-1710.

High Resolution Seismic Imaging for Characterizing Fractures in Potential Sites for Nuclear Waste Repositories, Ernest Majer, Larry Myer, John Peterson and Jung Mo Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1111-1121.

High-Level Waste Package Retrievability, Thomas W. Doering and David Siahl, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p362-365.

HLW Immobilization in Glass: Industrial Operation and Product Quality, P. Leroy, N. Jacquet-Francillon and S. Runge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p738-745.

The Impact of Thermal Loading on Repository Performance at Yucca Mountain, Thomas A. Buscheck and John J. Nitao, (High Level Radioactive Waste Management Program Committee, 1992), p1003-1017.

Impacts of Transportation Regulations on Spent Fuel and High Level Radioactive Waste Management Program Committee, 1992), p201-203.

Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, Carl B. Ellis and Cindy L. Rogers, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p201-203.

Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, Carl B. Ellis

An Interdisciplinary Approach to Learning and Teaching About Nuclear Waste Management, Roberta A. Scull, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1807-1812.

mittee, 1992), p1807-1812.
International Status of Dry Storage of Spent Fuels, K. J. Schneider, S. J. Mitchell and A. B. Johnson, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Program Committee, 1992), p1159-1165.
Interpolation Functions for Use with ORIGEN-2 Data, R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p77-81.
Issues Influencing Colocation and Integration of Cask Maintenance and MRS Facilities, John A. Richardson, David E. Borchardt and Christopher Charles, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1883-1888. 1992), p1883-1888.

1992, p1883-1888.
Labeling of the Spent Fuel Waste Package, W. G. Culbreth and A. K. Chapari, (High Level Radioactive Waste Management, High Level Radioactive Package Waste Management Program Committee, 1992), p395-400.
The Lathrop Wells Volcanic Center: Status of Field and Geochronology Studies, B. Crowe, R. Morley, S. Wells, J. Geissman, E. McDonaid, L. McFadden, F. Perry, M. Murrell, J. Poths and S. Forman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-201. Waste Mar p1997-2013.

waste management Program Committee, 1992), p1997-2013.

Lessons Learned from Utility NRC Licensing Experience, Jay E. Silberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p679-684.

Longevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, Bruce D. Marsh and Ronald G. Resmini, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2025-2032.

Materials Testing Aspects of the Problem of the Chernobyl NPP 4th Unit's High-Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2395-2398.

Method to Inhibit Technetium Migration in a Geologic Repository, Virlynds Statler and William H. Ellis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1985-1990.

Methodology Developed by the French National Nuclear Waste Management Agency (ANDRA) for the Performance Assessment of a Deep Geological Repository, P. Raimbault, C. Izabel and J. M. Peres, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p510-516

Model Sensitivity Analysis in Near-Field Performance Assessment, N. C. Garisto and D. M. LeNeveu, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

1992), p2284-2289.

1992, p226-2269.
Modeling Fault Rupture Hazard for the Proposed Repository at Yucca Mountain, Nevada, K. J. Coppersmith and R. R. Youngs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1 142-1150.

Modeling of Localized Electrochemistry Within Occluded Regions, Maureen J. Psaila-Dombrowski, Alan Turn-bull and Ronald Ballinger, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1687-1694.

Models for Calculating Radionuclide Release from the Near Field, L. Romero, L. Nilson, L. Moreno and I. Neretnieks, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p954-959.

A Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, Michael F. Sheridan, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p2033-2038.

p2033-2038.

MRS Site Requirements and Considerations and the Potential Influences of Specific Technology Selections, David F. Fenster, John A. Richardson and K. Michael Cline, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p204-211.

MRS Using a FUELSTORMT Vault, M. K. Valentine and H. Günther, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1875-1882.

Multi-Barrier, Conper-Base Containers for HLW Dispos-

Multi-Barrier, Copper-Base Containers for HLW Dispos-al, Dale T. Peters, Konrad J. A. Kundig, David F. Med-ley and Paul A. Enders, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), 366-376.

Near-Field Radiation Doses from Transported Spent Nu-clear Fuel, R. F. Weiner and K. S. Neuhauser, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

1992), p1205-1208.

1992), p1203-1209.
The Need for a True System Approach for High-Level Waste Management Systems Engineering Recommendations from the U.S. Nuclear Waste Technical Review Board, Dennis L. Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p822-826.

Negotiating the Voluntary Siting of Nuclear Waste Facili-ties—An Impossible Mission Made Possible, Robert M. Mussler, High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p1565-1566.

New Approaches for Regional Ground-Water Modeling in Southern Nevada, A. Keith Turner and Kenneth E. Kolm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p852-858.

A New Methodology for Repository Site Suitability Eval-uation, Ian Miller, Richard Kossik and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p494-501.

New Tools to Aid in Scientific Computing and Visualiza-tion, Michael G. Wallace and Tracy L. Christian-Freat, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p462-468.

mnuce, 1974, peo2-90s.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, Dinesh C. Gupta, Jacob Philip, Loren J. Lorig and Asadul H. Chowdhury, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p212-219.

Nuclear Waste Repository Program Oversight: Strategies of the Situs Jurisdiction, Phillip A. Niedzielski-Eichner and Elgie Holstein, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1927-1937.

ment Program Committee, 1992), p1927-1937.

Occurrence of Metallic Phases in Speen Nuclear Fuel: Significance for Source Term Predictions for High-Level Waste Disposal, English C. Pearcy and Hersh K. Manaktala, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p131-136.

On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, David Lewis Feldman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p143-151. p143-151.

Ontario Hydro Used Fuel Transportation Assessment, L. Grondin, D. Ribbans and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1209-1215.

Ontario Hydro's Plan for Used Nuclear Fuel, P. D. Stevens-Guille, H. A. Howes and J. Freire-Canosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p250-255.

ORIGNATE: PC Input Processor for ORIGEN-S, Stephen M. Bowman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p88-92.

ment Program Committee, 1992), p88-92.
Overview of ORIGEN2 and ORIGEN-S: Capabilities and
Limitations, C. V. Parks, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p57-64.
An Overview of the Yucca Mountain Global/Regional
Climate Modeling Program, Robert P. Sandoval, Yugal
K. Behl and Starley L. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),
p1188-1198-1198. p1188-1195.

Oxidation of Spent Fuel in Air at 175° to 195°C, R. E. Einziger, L. E. Thomas, H. C. Buchanan and R. B. Studfligh Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p1449-1457.

mutec, 1972, p.1449-1437.

Partitioning and Transmutation of Long-Lived Fission Products, J. A. Rawlins, D. W. Wootan, R. A. Karnesky, F. M. Mann and W. W. Schulz, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1711-1717.

Partitioning of Aqueous High-Level Wastes: State-of-the-Art Technology, Wallace W. Schulz, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1718-1723.

pp 176-1723.

Performance Assessment for a High-Level Waste Repository at Yucca Mountain, R. Shaw, R. F. Williams, J. C. Stepp and R. McCiure, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p869-873.

ment Program Committee, 1992, p. 809-873.

Performance-Assessment Comparisons for a Repository Containing LWR Spent Fuel or Partitioned/ Transmuted Nuclear Waste, R. W. Barnard and W. W.-L. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 1397-1403.

Perspectives on Seismic Design Basis Deterministic and Probabilistic Approaches, Robin K. McGuire, Robert T. Sewell, Gabriel R. Toro and J. Carl Stepp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1137-1141.

1992), p1137-1141.
Plutonium in Uranium Deposits: Natural Analogues of Geologic Repositories for Plutonium-Bearing Nuclear Wastes, David Curtis, June Fabryka-Martin, Ruben Aguilar, Moses Attrep, Jr. and Fred Roensch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p338-344.

Preclosure Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. Johansen, L. Grondin and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p481-488.

Preclosure Seismic Hazards and Their Impact on Site Suitability of Yucca Mountain, Nevada, J. Duane Gibson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1151-1158.

Prediction of Geological and Mechanical Processes While Disposing of High-Level Waste (HLW) into the Earth Crust, O. L. Kedrovsky and V. N. Morozov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Troparism Committee, 1992), p739-762.

Probabilistic Assessment of Spent-Fuel Cladding Breach, H. Foadian, Y. R. Rashid and K. D. Scager, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1018-1025.

1992), p1018-1025. Quality Assurance in a Cask Fleet Parts Control System, Charles Fernandez, P. N. McCreery and L. B. Shappert, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1343-1348. Quantification of Uncertain Outcomes from Site Charac-terization: Insights from the ESF-AS, William J. Boyle, David K. Parrish and Phillip C. Beccue, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), n652-564.

Quantifying Uncertainty in Site Characterization, William J. Boyle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

p216-219.

Quantitative Comparison Between Colloidal and Solute Transport, J. Y. Chung and K. J. Lee, (High Level Radioactive dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1966-1971.

Radiological Environmental Monitoring for the Yucca Mountain Site, K. J. Shenk, J. K. Prince and C. D. Sorensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2313-2317.

Committee, 1992), p2313-2317.

A Regulatory Perspective on Design and Performance Requirements for Engineered Systems in High-Level Waste, Robert M. Bernero, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p813-821.

The Remote Monitoring of Waste Glass Melter Product, K. K. Li and A. Schneider, (High Level Radioactive Waste Management Program Committee, 1992), p533-540.

Residual Stress Mitigation Considerations for Waste Package Design and Closure, E. S. Robitz, Jr. and T. W. Doering, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Thompson, Management Program Committee, 1992), p377-384.

The Role of Natural Analogues in Performance Assessing Radioactive Waste Management Program Committee, 1992), p377-384.

gram Committee, 1992), p377-384.
The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p1429-1436.
The Role of ORIGENS in the Design of Burnup Credit Spent Fuel Casks, M. C. Brady, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p65-71

W-859—A Key Link Between Government and Utili-ties, Mary Lee Payton and Kathleen Gibbard, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1281-1286.

1992, p1281-1286. Science and Students: Yucca Mountain Project's Educational Outreach and Public Tour Programs, April Van-Camp Gil, Paula Austin, Erin L. Larkin and Effic Harle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1819-1825.

Shielding and Criticality at the MRS Facility, Kenneth L. Ashe, Robert G. Eble and James R. Hilley, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2056-2061.

13723, p2u30-2001. Shipping Cask Development Loaded 4 PWR Fuel Assemblies, H. Y. Kang, J. C. Lee and S. G. Ro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1844-1847.

Site Investigation Equipment Developed by Teollisuuden Voima Oy, Henry Ahokas, Antti Öhberg, Heikki Hinkkanen and Pekka Rouhiainen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1092-1098. The Socio-Economic Impact Assessment for Nuclear Fuel Waste Disposal—Meeting the Challenges of the Canadian Environmental Review Process, J. Tamm and T. Włodarczyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Thing Level Radioactive Waste Management Committee, 1992), p1777-1785.

Source-Term Calculations for a Total Systems Analysis, David W. Engel, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), pl758-1764.

Frogram Committee, 1992), p.1736-1768.
Spacer Grid Hysteretic Model for the Structural Analysis of Spent Fuel Assemblies Under Impact: SAND91-2228C, TTC-1114, Peter R. Barrett, I. Kurkchubasche and Kevin D. Seager, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2249-2254.

Spent Fuel Characteristics Potentially Relevant to Repository Design Assessment, Michael G. Bale and Thomas A. Thornton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p116-121.

Spent Fuel Characteristics Provided by the CDB—An Update, K. J. Notz, R. Salmon, T. D. Welch, W. J. Reich and R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p122-130.

ment Program Committee, 1992), p122-130.

STACE: An Integrated Code for Evaluating Spent-Fuel Transport Cask Containment, Kevin D. Seager, Philip C. Reardon and Peter R. Barrett, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1765-1769.

Status of Infrastructure Studies and Results, Michael Conroy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p183-189.

The Status of Yucca Mountain Site Characterization Activities, Carl P. Gertz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p748-750.

Summary of the Exploratory Studies Facility Alternatives Study, L. S. Costin, A. W. Dennis and A. L. Stevens, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p643-649.

mittee, 1972, post-3047.
Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, J. B. Case, J. A. Fernandez and J. R. Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2298-2305.

Swiss High-Level Radioactive Waste Management Sys-tem Issues, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p25-27.

Management Program Committee, 1992), p.23-21.

A System for Measuring Moisture Transients in ClayBased Barrier Materials, A. W. L. Wan, B. H. Kjartanson, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1122-1128.

System Integration for the Disposal of Defense Transuranic Waste, Mark W. Frei, Joseph A. Coleman and Sandra Fucigna, (High Level Radioactive Waste Management, High Level Radioactive Waste Management).

Program Committee, 1992), p409-415.

System Selection of Concepts for Direct Disposal of Spent Fuel, K. Einfeld, K. D. Closs and U. Knapp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1860-1866

Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), pl 298-1302.

Teleseismic Tomography of the Yucca Mountain Region: Volcanism and Tectonism, John R. Evans and Moses Smith, III., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2372-2380.

Testing and Cobra-SFS Analysis of the VSC-17 Ventilated Concrete, Spent Fuel Storage Cask, Mikal A. McKinnon and Richard C. Schmitt, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p764-772.

Three Dimensional Visualization in Support of Yucca Mountain Site Characterization Activities, David W. Brickey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p438-461.

Three-Dimensional Finite Element Modelling of Near-Field Contaminant Transport in a Nuclear Fuel Waste Disposal Vault, Tim Chan and Frank Stanchell, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p297-303.

Uncertainty in Regulatory Decision-Making, D. Fehr-inger and S. Coplan, (Fligh Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p106-109.

Understanding Nuclear Waste Management Within a Global Framework, R. R. Powell, M. Robinson and W. Pankratius, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p1465-1469.

grain Communet, 1992, p.169-1409.
Understanding the High-Level Radioactive Waste Program Through the Cooperative Agreement Process, L. Cheryl Runyon, Millard Peck, III. and Glenn H. Gardner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p152-155.

Universal Storage/Transport/Disposal Packages, Marvin L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p228-232.

Uranyl Oxide Hydrates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, R. J. Finch and R. C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 232 323 p332-337

U.S. Department of Energy Issue Resolution Process, Maxwell B. Blanchard, Michael D. Voegele and Miguel A. Lugo, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1062-1066.

Use of a Method Specification For In Situ Compaction of Clay-Based Barrier Materials, B. H. Kjartanson, N. A. Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1129-1136.

The Use of Dynamic Compaction to Consolidate Nuclear Waste, Cliff Schexnayder and Robert G. Lukas, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1311-1323.

Use of Wingz Spreadsheet as an Interface to Total-System Performance Assessment, W. F. Chambers and A. H. Treadway, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493.

Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1196-1199.

Using the ORIGEN2 Computer Code for Near Core Activation Calculations, A. T. Luksic and B. D. Reid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p82-87.

Utilization of ORIGEN2 by the Characteristics Data Base, Tim D. Welch and Karl J. Notz, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-

Validation of System Models of Deep Geological Dispos-al of High-Level Nuclear Waste, Bjorn T. Cronhjort and Grant Sheng, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p2122-2125.

Validation of the TEXSAN Thermal-Hydraulic Analysis Program, S. P. Burns and D. E. Klein, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Variations of Hydrological Parameters of Tuff and Soil, J. S. Y. Wang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p727-731.

Water-Rock Interaction in New Zealand Hydrothermal Systems: Comparison of Some Simulated and Observed Goochemical Processes, William E. Glassley and Bruce W. Christenson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p352-356.

Wetted-Region Structure in Horizontal Unsaturated Fractures: Water Entry Through the Surrounding Porous Matrix, R. J. Glass and D. L. Norton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p717-726.

X-Ray and Visible Light Transmission as Two-

p711-726.
X-Ray and Visible Light Transmission as Two-Dimensional, Full-Field Moisture-Sensing Techniques A Preliminary Comparison, V. C. Tidwell and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1099-1110.

ucca Mountain Digital Database, Carl R. Daudt, Char-lotte Abrams and William J. Hinze, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p442-449.

ucca Mountain Project Total-System Performance Assement Preliminary Analyses: Overview, R. W. Barnard and H. A. Dockery, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p874-881.

The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, Nona F. Shepard and Donald L. Cham-pagne, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p593-599.

ALWP-67: A Little-Known Big Nuclear Accident, N. G. Botov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2331-2338.

Committee, 1992), p2331-2338.

Decision Management for the Hanford Environmental

Dose Reconstruction Project, William J. Roberds, H.

A. (Walt) Haerer and Dettof von Winterfeldt, (High

Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p1743-1750.

Hanford Defense Waste Separation Options, B. A. Wolfe,
W. B. Barton and D. G. Sutheriand, (High Level Radioactive

Waste Management, High Level Radioactive

Waste Management Program Committee, 1992),
p1701-1710.

Overview of the Hanford Environmental Dose Recon-

verview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Ikenberry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204.

Waste Mar p2339-2343

Numerical analysis

About Moving Contact Lines, Shih-An Yang and Allen T. Chwang, EM Apr. 92, p735-745. Analytical Solutions for Thick, Doubly Curved, Laminat-ed Shells, Jiarang Fan and Juyong Zhang, EM July 92, p1338-1356

Antiplane Problems of Monoclinic Material, Chien-Ching Ma, EM Sept. 92, p1765-1782.

Axisymmetric General Shells and Jointed Shells of Revo-lution, Pei Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

Branch Switching in Bifurcation of Structures, Fumio Fujii and Kok Keong Choong, EM Aug. 92, p1578-1596.

Cable-Stayed Bridge Vibration Due to Road Surface Roughness, Ton-Lo Wang and Dongzhou Huang, ST May 92, p1354-1374.

Combined Natural Convection and Surface Radiation in the Annular Region Between a Volumetrically Heated Inner Tube and a Finite Conducting Outer Tube, S. E. Gianoulakis and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p805-812. Combined Symbolic-Numeric Explosion Damage Assess-ment for Structures, Theodor Krauthammer, Raman Muralidharan and Walter Schmidt, CP Oct. 92, p417-434.

434.
Complete Biaxial Load-Deformation Behavior of RC Columns, Gang Gary Wang and Cheng-Tzu Thomas Hsu, ST Sept. 92, p2590-2609.
Computation of Turbulent Shear Flow Over Surface-Mounted Obstacle, Jianming He and Charles C. S. Song, EM Nov. 92, p2282-2297.
Crack Band Based Model for FEM Analysis of Concrete Structures, Grzegorz Gajer and Peter F. Dux, ST June 90, p1696-1714.
Critical Issues Related to a Combined Probabilistic Nucleical Structures.

90, p1696-1714.
Critical Issues Related to a Combined Probabilistic Numerical Analysis of Contaminant Transport in Porous Media, Jeffrey D. Cawlfield and Ming-Chee Wu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p232-235.
Development of Bed Features, Arved J. Raudkivi and Hans-H. Witte, HY Sept. 90, p1063-1079.
Dynamic Parameters Analysis of Piles, Xiao M. Zhu, Hsien P. Niu and Suo X. Zhang, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p224-240.
Effects of Liquefaction on Lateral Pile Responses, T. Kagawa, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p207-223.
Eigeaproperties of a Twisted, Nonuniform Rotating Beam by the Finite Element Method, Alan G. Hernried and Wei-Ming Bian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p924-927.

927.
Frosion of Steep River Banks and Time Evolution Towards Equilibrium Channel Shape, Agnes Kovacs and
Gary Parker, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p896-899.
Extended Kalman Filter-Finite Element for Geotechnical
Problems, Masaru Hoshiya and Atsushi Sutoh, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p128-131.
Fatigue Life Variability and Reliability Analysis of a
Wind Turbine Blade, Paul S. Veers, Herbert J. Sutherland and Thomas D. Ashwill, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p424-427.
Force Deformation Equations for Initially Curved Later-

Force Deformation Equations for Initially Curved Laterally Loaded Beam Columns, R. E. McConnel, EM July 92, p1287-1302.

Frequency Domain Analysis of Undamped Systems, Eduardo Kausel and Jose M. Roësset, EM Apr. 92, p721-734.

Improved Rectangular Element for Shear Deformable Plates, Fuh-Gwo Yuan and Robert E. Miller, EM Feb. 92, p312-328.

Kinematics of Nonlinear Random Waves near Free Surface, Sau-Lon James Hu and Dongsheng Zhao, EM Oct. 92, p2072-2086.

Measurement and Prediction of Surface Shear Stress in Annular Flume, D. I. Graham, P. W. James, T. E. R. Jones, J. M. Davies and E. A. Delo, HY Sept. 92, p1270-1286.

Normal-Depth Calculations in Complex Channel Sec-tions, Edward D. Shirley and Vicente L. Lopes, IR Mar./Apr. 91, p220-232.

tions, Edward D. Shirley and Vicente L. Lopes, IR Mar/Apr, 91, p.220-232.

Numerical Analysis of Discrete Nonlinear Fracture Mechanics, Walter H. Gerstle and Ming Xie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.784-787.

Numerical Simulation of Dynamic Shear Transfer, T. Krauthammer and A. Koubaa, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p.139-149.

A Numerical Study of Kinematics of Nonlinear Water Waves in Three Dimensions, Hongbo Xü and Dick K. P. Yue, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p.81-98.

Postbuckling of Polar Orthotropic Circular Plates—Retrospective, Archibald N. Sherbourne and Mahesh D. Pandey, EM Oct. 92, p.2087-2103.

Prediction Method for Local Scour by Warmed Cooling-Water Jets, S. Ushijima, T. Shimizu, A. Sasaki and Y. Takizawa, HY Aug. 92, p.1164-1183.

Random Initial Heterogeneity and Degradation in Brittle Materials, X. Yuan, F. F. Tang and G. Frantziskonis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p616-619.

Response of Cross-Anisotropic Seabed to Ocean Waves, Behrouz Gatmiri, GT Sept. 92, p1295-1314.

Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188-202

Semi-Implicit Finite Difference Model for Three-Dimensional Tidal Circulation, Vincenzo Casulli and Ralph T. Cheng. (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p620-631.

Shear-Band Analysis in Idealized Granular Material, J. P. Bardet and J. Proubet, EM Feb. 92, p397-415.

Soil Plug Response in Open-Ended Pipe Piles, M. F. Ran-dolph, M. May, E. C. Leong, A. M. Hyden and J. D. Murff, GT May 92, p743-759.

Solving Circular Curve Using Newton-Raphson's Meth-od, Chun-Sung Chen and Lih-Shinn Hwang, SU Feb. 92, p24-32.

Solving Turbulent Flows Using Finite Elements, John I. Finnie and Roland W. Jeppson, HY Nov. 91, p1513-

Spline Interpolations for Water Hammer Analysis, I. A. Sibetheros, E. R. Holley and J. M. Branski, HY Oct. 91, p1332-1351.

Stage-Discharge Relationship in Tidal Rivers, N. El-Jabi, G. Wakim and S. Sarraf, WW Mar./Apr. 92, p166-174.

A Study of Salt Transport Processes in Delaware Bay, Roy A. Walters, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p240-251.

Three-Dimensional Fracture Process Zone Detection in Concrete, K. D. Basham, Y. C. Jean and K. P. Chong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedtwecki, ed., 1992), p401-404.

Tidal Model Using Method of Characteristics, Panayis-Fokion C. Matsoukis, WW May/June 92, p233-248.

Timoshenko Beam Element Resting on Two-Parameter Elastic Foundation, L. M. Shirima and M. W. Giger, EM Feb. 92, p280-295.

## Numerical calculation

Automated Knowledge Acquisition of Preliminary Design Concepts, Mary Lou Maher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p975-982.

Computation of Flow in Ice-Covered Dune-Bed Chan-nels, J. Y. Yoon, V. C. Patel and R. Ettema, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p385-388.

High Frequency Basin Irrigation Design for Upland Crops in Rice Lands, George J. Moridis and Manuel Alagcan, IR July/Aug. 92, p564-583. Kinematic Wave Controversy, Victor M. Ponce, HY Apr.

91, p511-525.

umerical Differentiation Using Gaussian Quadrature, B. L. Ly, EM Nov. 90, p2568-2572.

Numerical Method for Finding Leaks in Pipe Networks, Ranko S. Pudar, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p809-

Numerical Solution of Muskingum Equation, Mohammad Akram Gill, HY May 92, p804-809.

Numerical Solution of the Transient Fokker-Planck Equation: The Movie, L. A. Bergman and B. F. Spen-cer, Jr., (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p519-522.

Use of Hierarchical Lattices for Predicting the Fluid or Stress Transfer in Concrete, D. Breysse, D. Fokwa and G. Schlatter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p171-174.

Water Wave Generated by a Porous Wavemaker, L. H. Huang, P. C. Hsieh and G. Z. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p336-340.

Numerical models

The Application of Technology to Solving Practical Prob-lems, James R. Walker, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p908-917. Armor Stability on Submerged Breakwaters, Miguel Losa-da, Nobuhisa Kobayashi and Francisco L. Martín, WW Mar/Apr. 92, p207-212.

Beam Strength Enhancement at Design Ductility Factor Demands, Gaetano Russo, ST Dec. 90, p3402-3416.

Bed-Load Transport on Transverse Slope. I, N ine and Gary Parker, HY Apr. 92, p513-535.

ine and Gary Farker, HY Ap. 75, 75, 753.

Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A. Evans and Robert Blams, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-335.

Comparison of Model and Field Results for Barbers Point Harbor, Michael J. Briggs, Linda S. Lillycrop and David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p387-399.

Comparison of Numerical Modeling Approaches for Sub-surface Immiscible Contaminant Transport, Klaus Rathfelder and Linda M. Abriola, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p275-280.

ed., 19921, p27-260.

Computation of Long-Term Three-Dimensional Hydrodynamics of New York Bight, Keu W. Kim, David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p300.

Computation of Wind Pressures on L-Shaped Buildings, Theodore Stathopoulos and Yongsheng Zhou, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p349-352.

Computational Model Verification Test Case Using Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p436-441.

The Control of Large Amplitude Liquid Sloshing with Moving Baffles, T. C. Su and Y. X. Wang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p208-211.

Density Currents and Shear-Induced Flocculation in Sed-imentation Tanks, D. A. Lyn, A. I. Stamou and W. Rodi, HY June 92, p849-867.

Design Procedure for Flow Over Side Weirs, Ali Uyumaz and Roger H. Smith, IR Jan./Feb. 91, p79-90.

Development of Detached Breakwater Design Criteria
Using a Shoreline Response Model, Julie Dean Rosati,
Mark B. Gravens and Monica A. Chasten, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),
p814-829.

Developments of Modelling Software for Civil Engineers, J. C. M. Dijkzeul, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p56-60.

A Discussion of the Numerical Modeling of Sea Ice Ridg-ing, Mark A. Hopkins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p888-891.

A Dual Approach to Low Frequency Energy Definition in a Small Craft Harbor, Chuck Mesa, (Coastal Engineer-ing Practice '92, Steven A. Hughes, ed., 1992), p400-

DYNLET1: Network Model for Tidal Inlet Dynamics, Michael Amein and Nicholas C. Kraus, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumbers, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p644-656.

Effect of Jetty Configuration on Wave Conditions and Dredge Quantities at Green Harbor, MA, Cheryl E Burke, Joan Pope and Mary A. Cialone, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992), p462-478.

Estimation of Wind Fields for Coastal Modeling, Edward F. Thompson and Zeki Demirbilek, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p564-573.

Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, 0-87262-861-2, 798pp.

Evaluation of Proposed Port Facilities, Charleston Har-bor, South Carolina, Samuel B. Heltzel, (Ports '92, David Torseth, ed., 1992), p791-801.

Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-200.

Experimental Studies for the Port of Bilbao Extension, José R. Iribarren and María J. Martin, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p149-157.

Finite-Strip Free-Vibration Analysis of Wood Floors, A. Filiatrault, B. Folz and R. O. Foschi, ST Aug. 90, p2127-2142.

Flow-Deformation Response of Dual-Porosity Media, Derek Elsworth and Mao Bai, GT Jan. 92, p107-124.

Frontal Dynamics and Circulation of the Upper Layer of a Fjordsystem with Complicated Topography, Harald Svendsen, Susanne R. Mikki and Lars G. Golmen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Reiph Cheng, ed. and Craig Swanson, ed., 1992), p252-267.

Ground Water Model Verification and Validation Issues, Task Committee on the Verification and Validation of Ground Water Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

The Hopscotch Algorithm for Three-Dimensional Simulation, Geneviève Ségol, HY Mar. 92, p385-406.

Hurricane Camille Shelf Wave Simulation Using a Nu-merical Ocean Circulation Model, Le Ngoc Ly and Lakshmi Kantha, Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p586-593.

Hydrodynamic Furrow Irrigation Model with Specified Space Steps, E. Bautista and W. W. Wallender, IR May/June 92, p460-465.

Hydrodynamics for Water Quality Models, Mark Dortch and Billy Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p145-

In-Channel Sediment Basins: An Alternative to Dam-Style Debris Basins, Wendy S. Gist, Scott E. Stones-treet and Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1000-1005.

Influences of Density on Circular Clarifiers with Baffles, Siping Zhou, J. A. McCorquodale and Z. Vitasovic, EE Nov./Dec. 92, p829-847.

Irregular Wave Setup and Run-up on Beaches, Nobuhisa Kobayashi and Andojo Wurjanto, WW July/Aug. 92, p368-386.

Mechanics of Saltating Grains. II, Masato Sekine and Hideo Kikkawa, HY Apr. 92, p536-558.

Model for Transport of Floating Debris in the Ocean, Y. C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.

Modeling Dredged Material Disposed in Open Water, B. H. Johnson, D. N. McComas and D. C. McVan, (Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Pennings, ed. and Nani G. Bhowmik, ed., 1992), p1036-1041.

Modeling of Rectangular Settling Tanks, Siping Zho John A. McCorquodale, HY Oct. 92, p1391-1405.

Modeling Three-Dimensional Circulation and Sediment Transport in Lakes and Estuaries, Y. Peter Sheng, D. E. Eliason and X.-J. Chen, (Estuarine and Coastal Model-ing, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p103-115.

Modelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, N. Jothi Shankar, H. F. Cheong and C. T. Chan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),

p669-683. NetCDF: A Public-Domain-Software Solution to Data-Access Problems for Numerical Modelers, Harry L. Jenter and Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p72-82.

Swanson, ed., 1972, p. 12-62.

Network Applications of the USGS Branch Model, Raymond W. Schaffranck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Nonlinear Water Waves Generated by Submarine and Aerial Landslides, P. Henrich, WW May/June 92,

p249-266.

Nowcast Protocol for the Great Lakes Forecasting Sys-tem, Chieh-Cheng J. Yen, Keith W. Bedford and David J. Schwah, (Estuarine and Coastal Modeling, Maicolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p140-148.

p140-148.

Numerical and Physical Modeling of Air Diffuser Plume,
D. W. Machina, J. A. McCorquodale and J. K. Bewtra,
EE Mar./Apr. 92, p253-267.

Numerical Beach Profile Modelling for Beachfill Projects,
Robert B. Nairn and Keith J. Riddell, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),
p12-28.

Numerical Methods 101—Convergence of Numerical Models, David B. Thompson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p398-403.

1992), p398-403.
A Numerical Model Simulation of Tidal Currents in Long Island and Block Island Sounds, L. Charles Sun, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p513-524.
Numerical Model Verification by Prescribed Solution Forcing—A Test Case, Dick P. Dee, F. Mauricio Toro and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p416-421. 421

Numerical Modeling of Flow and Transport Phenomena in a Fractured Rock and Its Calibration Process, A. Ko-bayashi, R. Yamashita and Y. Moro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e605.70

Numerical Modeling of Proposed Kawaihae Harbor, HI, Linda S. Lillycrop and Stanley J. Boc, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992), neering Practice p412-424

p412-424.

Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p952.

Numerical Modeling of Withdrawlas at Large Dams, Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p341-346.

346.

Numerical Prediction of Aeration in Hydroturbine Draft Tubes, M. Naghash and C. Bohac, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p293-298.

Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p418-429.

Numerical Simulation of a Sphere Moving Down an Incline with Identical Spheres Placed Equally Apart, Chi-Hai Ling, Chyan-Deng Jan, Cheng-lung Chen and Hsieh Wen Shen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767.

Numerical Simulation of Tidal Flow in Shallow Water Bay by Finite Difference Method, Xiaoyong Zhan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p684-693. Numerical Simulation of Tidally Induced Three-Dimensional Hydrodynamics of New York Bight, K. W. Kim, N. W. Scheffner, D. J. Mark and B. H. Johnson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), P466-475.

pado-475.
Numerical Simulations of Diastolic Flow Patterns in a Model Left Ventricle with Varying Degrees of Mitral Stenosis, Richard T. Schoephoerster and Erick A. Gonzalez, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p968-971.
Oceanographic Influences on Oil Spill Movement in the Arabian Gulf, S. Venkatesh and T. S. Murty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p108-113.
A PC Modelling System for the Simulation of Transport and Fate of Solutes and Suspended Substances, A. Christina Ellegaard, Iesper Weiergang and Helmer M. Petersen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p188-201.
Performance of Test Embankment Constructed to Failure

p188-201.

Performance of Test Embankment Constructed to Failure on Soft Marine Clay, B. Indraratna, A. S. Balasubramaniam and S. Balachandran, GT Jan. 92, p12-33.

Postbucking Response Simulations of Laminated Anisotropic Panels, Ahmed K. Noor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Prediction and Sensitivity of Recharges Due to Rainfall, Sampath K. R. Danda and Lakshmi N. Reddi, (Water Resource-Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402.

A Predictive Model of the Currents in Cleveland Bay, Brian King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p746-758.

Ralph Cheng, ed. and Craig Swanson, ed., 1992, p746-758.

Review of Equations of Conservation in Curvilinear Coordinates, Pei-Fang Wang, EM Nov. 92, p2265-2281.

Routing of Heterogeneous Sediments over Movable Bed: Model Development, Andre van Niekerk, Koen R. Vogel, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p246-262.

Side Weir in Triangular Channel, Ali Uyumaz, IR Nov. J. Dec. 92, p965-970.

Simulating THM Formation Potential in the Sacramento Delta: Part II, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p530-542.

SOA: Large Strain Consolidation Predictions, F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243.

Strategies for Groundwater Model Application Through GIS, David S. Ward, Robert M. Greenwald and P. Srinivasan, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p32.

Three-Dimensional Eulerian-Lagrangian Transport Model, A. K. M. Quamrul Absan and M. S. Bruno, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p1-12.

Three-Dimensional Incompressible Flow Calculations with MacCormack's Method, Robert S. Bernard and Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p219-224.

A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New

p219-224.
A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, Kwang-W. You, Lie-Yauw Oey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p453-465.
The Transport and Fate of Drilling Muds, M. Kathryn Pickens and Wilbert J. Lick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p202-214.

A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

Two-Dimensional Leachate Estimation through Landfills, Shabbir Ahmed, Reza M. Khanbilvardi, John Fillos and Phillip J. Gleason, HY Feb. 92, p306-322.

Lindstine of Dynamic Structural Systems by Learning.

los and Phillip J. Gleason, HY Feb. 92, p306-322. Updating of Dynamic Structural Systems by Learning, Masaru Hoshiya, Yasuyoshi Obuchi and Shigeru Noda, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p124-127. Use of Shi's Discontinuous Deformation Analysis on Rock Slope Problems, Man-chu Ronald Yeung and Richard E. Goodman, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p461-478.

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, T. L. Clark, R. T. Bruintjes and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p606-611.

Using a Numerical Model to Evaluate Dredging Options, Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p1024-1029.

Validation of the SEADYN90 Cable Simulation Model Using a Three-Dimensional Cable Deployment Data Set, Paul A. Palo, Linda C. Teragouchi and Maureen T. Smith, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p273-287.

Verification of a 3-D Hydrodynamic Numerical Model, David Daniel Abraham, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p225-230.

Verification Techniques Used in Modeling Charleston Harbor, South Carolina, Samuel B. Heltzel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p257-262.

Bnowmis, ed., 1972), pa. 37-20.
Visualization of Groundwater Contaminant Parameters,
Gregory D. Comes, James Warner and S. Paul Miller,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), pl 177.

Water-Level Oscillations in Esperance Harbour, Michael L. Morison and Jörg Imberger, WW July/Aug. 92,

Wave-Current Interaction with a Large Structure, Michael Isaacson and Kwok Fai Cheung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80.

## Nutrient loading

utrient issuing him to a Removal Efficiency of an Urban Detention Pond/Wetlands System in the Denver Metropolitan Area, Colorado, James R. Kunkel, Time Hy D. Steele, Ben Urbonas and Jay Carlson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p352-357.

Loading of Nutrients to Groundwater From High Source Areas During the Winter Period, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p573-578.

Modeling Nutrient Loadings from Croplands in the Cheapeake Bay Watershed, Anthony S. Donigian, Jr. and Avinash S. Patwardhan, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p817-822.

Nitrogen Removal at Baltimore's Back River WWTP, Robert J. Andryszak, Amarjit S. Sokhey, Jaswant S. Dhupar and Manu A. Patel, (Environmental Engineering, Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p617-622.

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwilo and Rudy S. Chow, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992.) pl.2-17.
Winter Nutrient Losses to Groundwater Associated with Various Tillage Manure Systems, Paul D. Robillard and Michael F. Walter, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p561-572.

Nutrients

Nutrients
Agricultural Impacts on Surface Water via Ground
Water, William L. Magette, Adel Shirmohammadi,
James D. Wood and Theodore H. Ifth, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p407-412.
Benthic Exchange of Toxic Contaminants, Steve C.
McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik,
ed., 1992), p386.
Full Scale Side-By-Side Testing of BNR Technologies,
Bruce B. Burms, Angela S. Essner, Dave L. Montgomery, Amarjit Sokhey and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In
Search of Solutions, F. Pierce Linaweaver, ed., 1992),
p30-35.
Nutrient Removal for Two Industrial Recycling Projects,

p30-35.

Nutrient Removal for Two Industrial Recycling Projects, Richard Sykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, p382-387.

A Review of Mathematical Models for Fine Sediment Transport Processes, Y. Peter Sheng, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p381-385.

Water Quality Modelling: Prediction of the Transport of Water Constituents in the Weser Estuary (Germany), Agmar Müller, Iris Grabemann and Bernhard Kunze, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

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Object-oriented languages
Comparing Object-Oriented and Relational Data Models
for Project Control, Jae-Jun Kim and C. William Ibbs,
CP July 92, p348-369.

Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992, 0-87262-892-2,

Intelligent Objects for Synthesis of Structural Systems, Dionysis R. Rigopoulos and Irving J. Oppenheim, CP July 92, p266-281.

July 92, p.206-281.

Object-Oriented Programming for Scientific Codes. I: Thoughts and Concepts, T. J. Ross, L. R. Wagner and G. F. Luger, CP Oct. 92, p.480-496.

Object-Oriented Programming for Scientific Codes. II: Examples in C++, T. J. Ross, L. R. Wagner and G. F. Luger, CP Oct. 92, p497-514.

Recurrence Interval of Geophysical Events, Hugo A. Loaiciga and Miguel A. Mariño, WR May/June 91, p367-382.

p367-382.

Ocean bottom

Dynamic Design of Deepwater Bottom-Founded Towers,
Denby Grey Morrison, (Civil Engineering in the
Oceans V, Robert T. Hudspeth, ed., 1992), p830-889.

Effects of Bottom Friction on Wave Breaking Using
RCPWAVE Model, Jerome P.-Y. Maa and S.-C. Kim,
WW July/Aug, 92, p387-400.

A Fourier Series Solution to Bottom Roughness Induced
Stresses During Pipe Laying, Naum Kershenbaum, J.
T. Powers and Donald Chang, (Civil Engineering in the
Oceans V, Robert T. Hudspeth, ed., 1992), p1006-1035.

Old Problems and New Challenges in Marine Geotechnical Engineering, Wayne A. Dunlap, (Civil Engineering
in the Oceans V, Robert T. Hudspeth, ed., 1992),
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Coean disposal
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Ocean Wastewater Plume, Libe Washburn, Burton H.
Jones, Alan Bratkovich, T. D. Dickey and Ming-Sue
Chen, HY Jan. 92, p38-38.

Chen, HY Jan. 92, p38-58.

Nassau County Sludge Management Multi-Phased Environmental Assessment, Steve Fangmann, John Pascucci, Thomas Immerso, Carl Koch and Darlene McKinney, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274.

Tansport of Low-Level Radioactive Soil at Deep-Ocean Disposal Site, James S. Bonner, Carlton D. Hunt, John F. Paul and Victor J. Bierman, Jr., EE Jan./Feb. 92, p101-119.

F. Paul and Victor J. Bierman, Jr., EE Jan./Feb. 92, p101-119.

Ocean engineering
Advanced Structures in Very Deep Water, Richard J. Seymour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952.

Diffusion and Dispersion in Coastal Waters, E. John List, Gregory Gartrell and Clinton D. Winant, HY Oct. 90, p1158-1179.

Fiber Ropes for Ocean Engineering in the 21st Century, John F. Flory, Henry A. McKenna and Mike R. Parsey, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p934-947.

Internationalization of Engineering Professions, N. D. Birrell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p983-1095.

The Mother of All Resilient Structures: Fixed-Base Tower in 3000-Foot Water and Some Outstanding Issues, Peter W. Marshall, Susan L. Smolinski and Denby G. Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p238-272.

An Ocean Engineering Program for the 21st Century, L. S. Fletcher and J. E. Flipse, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p218-242.

Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

Sea Floor Wave-Induced Water Kinematics for Design of Pipeline, Leon Borgman and Robert Hudspeth, ed., 1992), p44-466.

Three-Dimensional Characteristics Model of Wind-Generated Turbulent Flow, Panayis-Fokion Matsoukis

Three-Dimensional Characteristics Model of Wind-Generated Turbulent Flow, Panayis-Fokion Matsoukis and Aristotelis Papadopolis-Dezorzis, EM Aug. 92, p1526-1545.

p1520-1343.
Tidal Model Using Method of Characteristics, Panayis-Fokion C. Matsoukis, WW May/June 92, p233-248.
Two Basic Concepts in Offshore Engineering, Guillermo D. Hahn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p188-191.

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Ocean environments
Composites for Offshore Applications: A Multidisciplinary Education Program for the Marine Industry, Diane
S. Kukich, Vistasp M. Karbhari and John W. Gillespie,
Jr., (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p953-967.
Microorganism Survival in Ice-Covered Marine Environment, S. J. Stanley, D. W. Smith and G. D. Milne, CR.
June 92, p58-72.
Model Development for Operational Lies to Help Spill

Model Development for Operational Use to Help Spill Combating and Sea Rescue, Heimo Vepsă, Erkki Alasaarela and Juha Sarkkula, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p149-156.

Model for Transport of Floating Debris in the Ocean, Y. C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.

Old Problems and New Challenges in Marine Geotechnical Engineering, Wayne A. Dunlap, (Crul Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1051-1069.

p1051-1069.
Predicting Fate and Effects of Hydrocarbons in the Oceans, Richard A. Geyer, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p356-369.
Specifying the Offshore Environment, George Z. Forristall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1-41.
Three-Dimensional Circulation Modeling of the Coastal and Ocean Environments, Keh-Han Wang, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p637-651.

Ocean mining
Offshore Challenge, Gordon H. Moore and Juan J.
Campo, CE Oct. 92, p48-51.

Ocean resources
Editor's Preface, Richard J. Seymour, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), pl-3.

Facilitating Technology for Electric Power Generation, Ian Pope, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p276-292. Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992, 0-87262-894-9, 313pp.

Coean thermal energy conversion
Closed Cycle Ocean Thermal Energy Conversion, F. A.
Johnson, (Ocean Energy Recovery: the State of the Art,
Richard J. Seymour, ed., 1992), p70-108.
Economics of Ocean Thermal Energy Conversion
(OTEC), Luis A. Vega, (Ocean Energy Recovery: the
State of the Art, Richard J. Seymour, ed., 1992), p152-181.

Facilitating Technology for Fuel Production and Energy-Enhanced Products, Patrick Takahashi, Charles Ki-noshita, Stephen Oney and Joseph Vadus, (Ocean En-ergy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p293-305.

ed., 1992), p235-3U3.
Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992, 0-87262-894-9, 313pp.
State of the Art in Open-Cycle Ocean Thermal Energy Conversion, Michel Gauthier, Jean Marvaldi and Federica Zangrando, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p109-151.

Ocean waves

Economics of Wave Power, George Hagerman, (Ocean
Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p213-257.

The Effect of Wave Grouping on the Characteristic Wave
Height, Chia Chuen Kao, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p83-86.

Flow Field Induced by Sea Waves Over Brick-Pattern
Ripples, G. Vittori, HY Sept. 92, p1241-1259.

Intermittent Kinematics for Nonlinear Random Waves
Near Ocean Surface. Sau-Lon James Hu and

Near Ocean Surface, Sau-Lon James Hu and Dongsheng Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p91-

The Landfall of Hurricane Hugo, Billy L. Edge, Ben L. Sill and Orville T. Magoon, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p988-993

Recent Wave Kinematics Experimental Studies, R. E. Randall, J. Zhang, C. A. Spell and J. K. Longridge, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p607-621.

Response of Cross-Anisotropic Seabed to Ocean Waves, Behrouz Gatmini, GT Sept. 92, p1295-1314.

Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188-202.

202.
The SIMBAT Software Package for Stochastic Interpolation of Ocean Wave Kinematics as an Aid in the Engineering Design of Large Floating Structures, Leon Borgman, David Shields, Robert Zueck and Warren Bartel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p585-606.

Oceanographic surveys
Oceanographic Influences on Oil Spill Movement in the
Arabian Gulf, S. Venkatesh and T. S. Murty, (Hydraulic Engineering: Saving a Threatened Resource—In
Search of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p108-113.

Oceanography
Shoreline Profile of Stokes-Mode Edge Waves, Harry H.
Yeh, WW Jan./Feb. 92, pl 12-116.

Tidal Influence on the Stratification of the Miramichi Estuary, A. St-Hilaire, C. Bettignies, D. Booth and E. M.
P. Chadwick, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p953-958.

Oceans

A Coastal-Ocean Hindcast/Forecast Model, Ping Chen, Yan-H. Zhang, Kwang-W. You and Lie-Yauw Cey, (Extuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p175-187.

Editor's Preface, Richard J. Seymour, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p1-3.

1992), pl-3.

Hurricane Camille Shelf Wave Simulation Using a Numerical Ocean Circulation Model, Le Ngoc Ly and Lakshmi Kantha, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p586-593.

Model for Pollutant Transport by Eddy Simulation, E. R. Holley, Y. C. Su, G. H. Ward and R. de Souza, (Hydraulic Engineering: Swaing a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598.

State of the Art in Other Ocean Energy Sources, Richard J. Seymour and Preston Lowrey, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p258-275.

Odor coatrol

Alkaline Sludge Stabilization Processes Offer Viable
Sludge Management Options, Gary S. MacConnell,
Morris V. Brookhart and Philip E. Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed.,
1992), p394-398.

1992), p394-398.
Baltimore City's 1989 Sludge Crisis—A Case History, George G. Balog, Robert T. Mohr and Nicholas H. Frankos, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p256-261.
Determining Causes for Taste and Odor in Bandar Abbas's Drinking Water, Mahmoud Asadi and A. R. Meshas's Drinking Water, Mahmoud Asadi and A. R. Meshasis Drinking Water, Mahmoud Asadi and A. R. Meshasis Drinking Water, Mahmoud Sadi and A. R. Meshasis Drinking Water, Mahmoud Sadi and A. R. Meshasis Drinking Water Theodore Taste and Company of Solutions, Mohammad Karamouz, ed., 1992), p610-610.
Toward a Low-Emissions Wastewater Treatment Plant, Albert B. Pincince, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p1-6.

Offshore drilling
The Transport and Fate of Drilling Muds, M. Kathryn
Pickens and Wilbert J. Lick, (Estuarine and Coastal
Modeling, Malcolm L. Spaulding, ed., Keith Bedford,
ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p202-214.

Offshore engineering
Coastal Engineering Practice '92, Steven A. Hughes, ed.,
1992, 0-87262-866-3, 1100pp.

Measured Internal Kinematics for Shoaling Waves with Theoretical Comparisons, M. W. Griffiths, W. J. Eas-son and C. A. Greated, WW May/June 92, p280-299.

Two Basic Concepts in Offshore Engineering, Guillermo D. Hahn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p188-191.

Offshore pipeline

Buckle Propagation in Submarine Pipelines, G. D. Hahn, M. She and J. F. Carney, III., EM Nov. 92, p2191-2206.

Parametric and External Excitation of Marine Risers, S. K. Thampi and J. M. Niedzwecki, EM May 92, p942-

Wave Forecasting for Construction in Mobile Bay, Scott L. Douglass, William W. Schroeder and John T. Robin-son, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p713-727.

Offshore platfor

Application of Fracture Mechanics Methodology to Assessment of Weld Defects in Offshore Platforms, T. Hsu, E. W. Carter, S. L. Fu and J. S. Mitchell, (Crul Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p733-749.

Current Blockage Effects on Model-Scale Offshore Plat-form, Timothy D. Finnigan, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p294-310.

Design of Tension Leg Platforms: A Knowledge Based Approach, John M. Niedzwecki and Oriol R. Rijken, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p288-293.

Offshore Challenge, Gordon H. Moore and Juan J. Campo, CE Oct. 92, p48-51.

Offshore Pile System Reliability, Wilson H. Tang and Robert B. Gilbert, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1002). 2023. 1992), p228-231.

Offshore Structures—Past, Present, and Future, Lyle Finn, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p218-242.

Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

Re-Qualification of Offshore Platforms, R. G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p427-443.

Screening Old Offshore Platforms: Previous Approaches and Further Thoughts, Peter W. Marshall, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p518-530.

Simplified Methods for Assessment of the Structural Integrity of Existing Steel Jacket Platforms in the Gulf of Mexico, Rajiv K. Agarwal, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p750-769.

Static Wave Force Procedure for Platform Design, John C. Heideman and Timothy O. Weaver, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p496-517.

TLP Fatigue Due to Second-Order Springing, S. R. Winterstein, T. Marthinsen and T. C. Ude, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p455-458.

Uncertainty and Reliability Analysis of Jacket Platform, A. Olufsen, B. J. Leira and T. Moan, ST Oct. 92, p2699-2715.

The U.S. Naval Facilities Offshore Platform Inspection, Maintenance, Repair and Rehabilitation Program, T. Regin and T. O'Boyle, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p531-545.

3D Frequency Domain Analysis of Offshore Structures, J. F. McNamara and M. Lane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p192-195.

Advanced Structures in Very Deep Water, Richard J. Seymour, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952.

Asymptotic Analysis of TLP Tendons and Risers, C. Oran, EM Jan. 92, p56-73.

Behavior of Partially Grout-Filled Damaged Tubular Members, S. Parsanejad and P. Gusheh, ST Nov. 92, p3055-3066.

Case Study of an Offshore Horizontal Boring, John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p697-712.

Composites for Offshore Applications: A Multidisciplinary Education Program for the Marine Industry, Diane S. Kukich, Vistasp M. Karbhari and John W. Gillespie, Jr., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p953-967.
Computer Aided Design for Deep Water Offshore Risers, C. P. Johnson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p243-257.
Corrosion Fatigue of Deepwater Offshore Materials, Gordon F. Fowkes and Harris L. Marcus, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.
Dynamic Design of Deepwater Bottom-Founded Towers.

ing in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.

Dynamic Design of Deepwater Bottom-Founded Towers, Denby Grey Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p830-889.

Dynamic Response Characteristics of Jack-Up Drilling Units, David T. McDonald and Robert G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p906-920.

Effect of Static Offset on TLP Modeling, C. Oran, EM Jan. 92, p74-91.

Effects of Freezing on Impact Properties of RTM Composites, and Their Applications in Offshore Structures, Gregory J. Pope and Vistasp M. Karbhari, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p828-839.

Environmental Effects of Beaufort Sea Causeways, J. M. Colonell, B. J. Gallaway and A. W. Niedoroda, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974.

p958-974.
Fatigue Life of Offshore Steel Structures Under Stochastic Loading, Henning Agerskov and Niels Thougard Pedersen, ST Aug. 92, p2101-2117.
Hydraulic Design of Offshore Breakwater in Sergipe, Brazil, Otavio J. Sayao and Charles P. Fournier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693.

1992), p679-693.

Hydrodynamic Forces and Evolution of a Nearshore Berm at South Padre Island, Texas, James A. Aidala, Neil T. McLellan and Cheryl E. Burke, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239.

Internationalization of Engineering Professions, N. D. Birrell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p983-1005.

Kinematics of 2-D Transient Water Waves Using Laser Doppler Anemometry, Cheung H. Kim, Robert E. Randall, Sung Y. Boo and Martin J. Krafft, WW Mar./Apr. 92, p147-165.

inearisation and Offshore Fatigue Reliability, R. E. Melchers and M. Ahammed, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin,

and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p.5-8.
Modal and Wave Load Identification by ARMA Calibration, Jakob Laiguard Jensen, Poul Henning Kirkegaard and Rune Brincker, EM June 92, p1268-1273.
Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, the St. Lucie Velocity Caps, Sulian A. Khondker, Tatsuski Nakato, H. Roger Gavanikar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-256.

A Non-Gaussian Fatigue Model for Offshore Structures, Jin Wang and Loren D. Lutes, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p463-466.

Nonlinear Wave Runup on Large Circular Cylinders, David L. Kriebel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p173-187.

Offshore Pile System Reliability, Wilson H. Tang and Robert B. Gilbert, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p228-231.

Offshore Structures—Past, Present, and Future, Lyle Finn, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p218-242.

Parametric and External Excitation of Marine Risers, S. K. Thampi and J. M. Niedzwecki, EM May 92, p492-960.

Probability of Wave Force on Horizontal Members, Laurence Z. H. Chuang and C. C. Tung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p467-480.

Reserve Capacity Design Method (RCDM) for Deepwater Piled Foundations, J. M. E. Audibert, J. L. Mueller and S. R. Bamford, WW Jan./Feb. 92, p32-42.

Responses of Bilinear and Impacting Systems Subjected to Regular Waves, Somchai Sumanuskajonkul and Sau-Lon James Hu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p196-199

Scour Around a Vertical Pile in Waves, B. Mutlu Sumer, Jørgen Fredsøe and Niels Christiansen, WW Jan./Feb. 92, p15-31.

92, p13-31. cond-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188-202

381

p66-80. Wire Recovery Length in Suspension Bridge Cable, Mo-hammed Raoof and Yu Ping Huang, ST Dec. 92, p3255-3267.

Oglesby, Clarkson H.
Death Claims Two ASCE Honorary Members, CE Nov.
92, p76.

ssessing the Leaching Potential of Herbicides at the Ohio MSEA, S. R. Workman, A. D. Ward and W. G. Knisel, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., Resource—In Se 1992), p413-418. Columbus Discovers Traffic Management, CE Apr. 92,

p22. nio Looks to Improve Bridge-Deck Performance, CE

Oct. 92, p11. Safety is in the Eye of the Beholder, CE Nov. 92, p10.

Ohio River

Aeration at Ohio River Basin Navigation Dams, Steven F. Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens and George H. Taylor, EE Mar./Apr. 90, p361-375.

p361-375.

Characteristics of Waves and Drawdown Generated by Barge Traffic on the Upper Mississippi River System, Ta Wei Soong and Nani G. Bhowmik, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p672-676.

A Real Hands-On Cleanup, CE Aug. 92, p8. Spatial Decision Support System for Toxic Spill Modeling in the Ohio River, Walter M. Grayman, Jason P. Heath and Richard M. Males, (Waler Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p74-78.

Two-Dimensional Hydraulic Analysis of the Owensboro Bridge and Approaches, M. A. Ports, T. G. Turner and D. C. Frochlich, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamour, ed., 1992), p280-

Applying the ARMOS and MOFAT Models to a Major Oil Spill, Otto J. Helweg, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.885-590.

p.202-290.

An Assessment of Environmental Costs Associated with Crude Oil Pipeline Damage Caused by Earthquakes, Ronald T. Eguchi, Susan D. Pelmulder and Hope A. Seligson, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), pl53-167.

p133-107. Migration of Spilled Oil from Ruptured Underground Crude Oil Pipelines in the Memphis Area, Otto J. Helweg, (Lifeline Earthquake Engineering in the Cen-tral and Eastern U.S., Donald B. Ballantyne, ed., 1992), p140-152.

Seismic Hazard Along a Central U.S. Oil Pipeline, How-ard H. M. Hwang, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), pl 10-124.

Seismic Hazard Analysis for Crude Oil Pipelines in the New Madrid Seismic Zone, Michael J. O'Rourke, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p125-139.

Oil shale

Nature Phydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, Victor R. Hasfurther and John P. Turent, (Irrigation and Drinage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p395-400.

Analytical Prediction of Gasoline Thickness on the Water Table, M. Yavuz Corapcioglu, Rajasekhar Lingam and Vern K. Haisler, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search Solutions, Mohammad Karamouz, ed., 1992), p.254-

Applying the ARMOS and MOFAT Models to a Major Oil Spill, Otto J. Helweg, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p585-590.

p153-167.

Diversion Oil Booms in Current, M. Robinson Swift, Barbaros Celikkol, Gilles LeCompagnon and Chris E. Goodwin, WW Nov./Dec. 92, p587-598.

Laboratory Study of Oil Slick Subjected to Nearshore Circulation, A. G. L. Borthwick and S. A. Joynes, EE Nov./Dec. 92, p905-922.

Migration of Spilled Oil from Ruptured Underground Crude Oil Pipelines in the Memphis Area, Otto J. Helweg, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), n140-152 p140-152

Model Development for Operational Use to Help Spill Combating and Sea Rescue, Heimo Vepsä, Erkki Alasaarela and Juha Sarkkula, Keitmarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p149-156.

Oceanographic Influences on Oil Spill Movement in the Arabian Gulf, S. Venkatesh and T. S. Murty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p108-113.

Oil Under Ice: Buoyancy Viscous Spreading, Sujeeva A. Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p102-107.

Predicting Fate and Effects of Hydrocarbons in th Oceans, Richard A. Geyer, (Civil Engineering in th Oceans V, Robert T. Hudspeth, ed., 1992), p356-369.

A Shell Approach to Modeling Oil Spill Trajectory and Fate and Search and Rescue Operations, M. L. Spauld-ing, E. Howlett, K. Jayko, E. Anderson and T. Isaji, (Es-tuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p157-174.

Oils

Improvement of Fuel Oil Contaminated Soils by Additives, Sibel Pamukeu and Hazem Hijazi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1285-1297.

## Oklahoma

Life in the Fast Track, Richard L. Ridings and Stephen B. Quinn, CE Apr. 92, p46-49.

Oklahoma's Ground Water Protection Strategy, Michael D. Smolen and Patricia E. Norris, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p98-103.

Modeling Flow and Flood-Plain Storage in a Tidally Affected River, A. G. Strickland and Jerad D. Bales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1130-1135.

One-Dimensional River Flow Simulation with Particular Consideration of Ecology and Environment, E. Ritterbach, M. Schröder and G. Rouvé, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1142-1147.

WSPRO, A Model for Water-Surface PROfile Computa-tions, James O. Shearman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p865.

On-site disposal syste

Application of NUHOMS\* to an Integrated MRS/ Transportation System, J. M. Rosa, R. A. Lehnert and R. D. Quinn, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p196-200.

On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, David Lewis Feldman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p143-151.

waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing Plant, Krishna Vinjamuri, Swami V. Raman, Dieter A. Knecht and James D. Herzog, (High Level Radioactive Waste Management, High Level Radioactive Waste, Management Program Committee, 1992), p1261-1271.

## Open channel flow

I-D Open-Channel Flow Simulation Using TVD-McCormack Scheme, P. García-Navarro, F. Alcrudo and J. M. Savirón, HY Oct. 92, pl 359-1372.

Bank Erosion Study of the Nile River at Bani Mazar, A. F. Ahmed and M. M. Gasser, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p816-821.

A Brief Literature Review of Open-Channel Current Meter Testing, Kirk G. Thibodeaux, (Hydraulic Engla-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p458-463.

Characteristic Dissipative Galerkin Scheme for Open-Channel Flow, F. E. Hicks and P. M. Steffler, HY Feb. 92, p337-352.

Characteristics of U.S. Geological Survey Discharge Measurements for Water Year 1990, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p452-457.

Critical Depth Relations for Flow Measurement Design, A. J. Clemmens and M. G. Bos, IR July/Aug. 92, p640-644.

Dividing Flow in Open Channels, Amruthur S. Ramamurthy, Duc Minh Tran and Luis B. Carballada, HY Mar. 90, p449-455.

Entropy-Based Velocity Distribution Model in Study of Distribution of Suspended-Sediment Concentration, Chao-Lin Chiu and Corey A. Rich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p520-525.
Field-Measured Hydraulic Resistance Characteristics in Vegetation-Infested Canals, Mohamed F. Bakry, Timothy K. Gates and Ahmed F. Khattab, IR Mar/Apr. 92, p256-274.

Incorporating Hydraulic Structures in an Open-Channel Model, Eric D. Swain, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

p118-1123.

Menu of Coupled Velocity and Sediment-Discharge Relations for Rivers, M. Fazle Karim and John F. Kennedy, HY Aug. 90, p978-996.

Modeling Vertical Structure of Open-Channel Flows, Alan F. Blumberg, Boris Galperin and Donald J. O'Connor, HY Aug. 92, p1119-1134.

Modern Approach to Design of Grassed Channels, N. Kouwen, IR Sept./Oct. 92, p733-743.

Network Applications of the USGS Branch Model, Raymond W. Schaffranck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1159-1164. p1159-1164.

p1159-1164.

Normal-Depth Calculations in Complex Channel Sections, Edward D. Shirley and Vicente L. Lopes, IR Mar./Apr. 91, p220-232.

Numerical Methods 101—Convergence of Numerical Models, David B. Thompson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1902). 1902. 1992), p398-403.

Open-Channel Flow Algorithm in Newton-Raphson Form, John N. Paine, IR Mar./Apr. 92, p306-319.

Optimal Irrigation Delivery System Design under Uncertainty, Timothy K. Gates, Abdulmohsen A. Alshaikh, Samir I. Ahmed and David J. Molden, IR May/June 92, p433-449. Resistance in Flat-Bed Sediment-Laden Flows, D. A. Lyn, HY Jan. 91, p94-114.

Shock Pattern at Abrupt Wall Deflection, Markus Schwalt and Willi H. Hager, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p231-236

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p599-605.

Stochastic Theory for Irregular Stream Modeling. Part I: Flow Resistance, Shu-Guang Li, Lakshmi Venkataraman and Dennis McLaughlin, HY Aug. 92, p1079-

Suspended Sediment-Transport Capacity for Open Chan-nel Flow, Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204.

Turbulence Characteristics of Sediment-Laden Flows in Open Channels, D. A. Lyn, HY July 92, p971-988. Variation of Velocity Distribution along Nonuniform Open-Channel Flow, Chao-Lin Chiu and David W. Murray, HY July 92, p989-1001.

Murray, HY July 92, p989-1001.
Vedemikov's Number as a Measure of Flow Stability, Cheng-lung Chen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p753.
Velocity Profiles in Steep Open-Channel Flows, Akihiro Tominaga and Iehisa Nezu, HY Jan. 92, p73-90.
Verification Techniques Used in Modeling Charleston

Tominaga and lehisa Nezu, HY Jan. 92, p73-90. Verification Techniques Used in Modeling Charleston Harbor, South Carolina, Samuel B. Heltzel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p257-262. WSPRO, A Model for Water-Surface PROfile Computations, James O. Shearman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p865.

Open channels

Computation Method for Regulating Unsteady Flow in Open Channels, Fubo Liu, Jan Feyen and Jean Berlamont, IR Sept./Oct. 92, p674-689.

Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Faeh and Géraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1112-1117. Dimensionally Homogeneous Manning's Formula, Ben Chie Yen, HY Sept. 92, p1326-1332. Effects of Porous Bed on Turbulent Stream Flow above Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92, p1272-1286.

Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92, pl222-1240.

EQSWP: Extended Unsteady-Flow Double-Sweep Equation Solver, Theodor Strelkoff, HY May 92, p735-742.

Flow Capacity through Wide and Submerged Vegetal Channels, M. W. Abdelsalam, A. F. Khattab, A. Khalifa and M. F. Baky, IR Sept./Oct. 92, p724-732.

Flow in Trapezoidal Channels, W. E. Hart, B. P. Thoreson and S. A. Musil, IR Nov./Dec. 92, p971-976.

Gradual Development of Bores in Canal Systems, Theodor Strelkoff, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p456-461.

Modeling Low-Flow Mixing through Pools and Riffles, Il Won Seo and W. Hall C. Maxwell, HY Oct. 92, p1406-1423.

Won Seo and W. Hall C. Maxwell, HY Oct. 92, pl 406-1423.

Physical Modeling of a High Velocity Covered Urban Drainage Channel, Stephen E. Stump, Charles H. Tate, Jr. and Robert U. Castle, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p618-623.

Probabilistic Design of Open Drainage Channels, Said M. Easa, IR Nov. Dec. 92, p868-881.

Small Parshall Flume Rating Correction, Steven R. Abt, Christopher Cook, Kenneth J. Staker and Derek D. Johns, HY May 92, p798-803.

Stability Problems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p846-851.

Study of Open-Channel Dynamics as Controlled Process, Yuri A. Ermolin, HY Jan. 92, p59-72.

Variation of Velocity Distribution along Nonuniform Open-Channel Flow, Chao-Lin Chiu and David W. Murray, HY July 92, p989-1001.

Vertical Distribution of Suspended Sediment in Uniform Open-Channel Flow, Motohiko Umeyama, HY June 92, p936-941.

Openings Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-504.

Operating criteria

Maximum and Minimum Storage Trajectories That Meet
Specific Risk Levels, Laura Fagherazzi, Jean-Claude
Rassam and André Turgeon, (Risk-Based Decision
Making in Water Resources V, Yacov Y. Haimes, ed.,
David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992),

Preliminary Analysis of Repository Operational Criteria, John P. Hageman, Asadul H. Chowdhury and Jerome R. Pearring, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-

gram Committee, 1992), p1067-1073.

Standard Methodologies for the Forensic Investigation of Pavements, James O'Kon, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p31-38.

White, ed., 1992), p31-38.

Operation
Architectures for Mission Control at the Jet Propulsion Laboratory, Roger A. Davidson and Susan C. Murphy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1567-1578.

Computation Method for Regulating Unsteady Flow in Open Channels, Fubo Liu, Jan Feyen and Jean Berlamont, IR Sept./Oct. 92, p674-689.
Construction of a Far-Term (2020+AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Montoya and Ann Campbell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p427-440.
A Diagnostic Aid for Wastewater Treatment Plants, Catherine D. Perman and Leonard Ortolano, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewki, ed. and Lewis A. Rossman, ed., 1992), p86-104.

Energy Efficient Pump Station Operation with a Pump Switching Constraint, Kofi Awumah and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p604-609.

EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1656-1667.

Experience with NRC Licensing of a Dual Purpose Cask, Ivan Stuart, Todd Lesser and Marvin Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1231-1235.

Expert System for Anaerobic-Digestion-Process Opera-

1992), p1231-1235.
Expert System for Anaerobic-Digestion-Process Operation, Michael W. Barnett and John F. Andrews, EE Nov/Dec. 92, p949-963.
Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, Catherine D. Perman and Leonard Ortolano, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.
Interfacing with the Public on Water-Related Issues—

Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.

Interfacing with the Public on Water-Related Issues—What TVA is Doing, Janet C. Herrin and Arland W. Whitlock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p293-298.

Operation of the Central Valley Project During California's Drought, John F. Burke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p348-353.

Ted Engman, ed., 1992), p305-309.

Patricipation Model for Operation of Recharge Basins, Hasan Mushtaq, Larry W. Mays and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p305-309.

Participative Process in Tube Well Irrigation Development, Manuel Olin, IR Nov./Dec. 92, p882-894.

Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.

Role of Land Information Systems Bureau of Reclamation, James B. Robertson and Sharen L. Wood, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p317-322.

Transient Hydraulic Model for Simulating Canal-Network Operation, F. N. Gichuki, W. R. Walker and G. P. Merkley, IR Jan./Feb. 90, p67-82.

U.S. Department of Energy Issue Resolution Process, Maxwell B. Blanchard, Michael D. Voegele and Miguel

U.S. Department of Energy Issue Resolution Process, Maxwell B. Blanchard, Michael D. Voegele and Miguel A. Lugo, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1062-1066.

NASA's Future Plans for Space Astronomy and Astro-physics, Michael S. Kaplan, (Engineering, Constru-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1789-1797.

p1/89-1/97.

Optimal control methods
Aseismic Hybrid Control of Nonlinear and Hysteretic Structures 1, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1423-1440.

Aseismic Hybrid Control of Nonlinear and Hysteretic Structures II, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1441-1456.

Bayesian Inference for Feedback Control. I: Theory, A. J. Clemmens and J. B. Keats, IR May/June 92, p397-415.

Bayesian Inference for Feedback Control. II: Surface Irrigation Example, A. J. Clemmens and J. B. Keats, IR May/June 92, p416-432.

Control of Hysteretic System Using Velocity and Acceler-Control of Hysteretic System Using Velocity and Acceler-

Control of Hysteretic System Using Velocity and Acceleration Feedbacks, J. N. Yang, Z. Li and S. C. Liu, EM Nov. 92, p2227-2245.

Design of Trapezoidal Expansive Transitions, Prabhata K. Swamee and Bharat C. Basak, IR Jan./Feb. 92, p61-

Distributed Approach to Optimized Control of Street Traffic Signals, Nicholas V. Findler and John Stapp, TE Jan./Feb. 92, p99-110.

Frequency Domain Optimal Control of Wind-Excited Buildings, J. Suhardjo, B. F. Spencer, Jr. and A. Kareem, EM Dec. 92, p2463-2481.

On-Line Optimal Control of Urban Water Supply, Otto J. Helweg, Shahram Pezeshk and Kenneth E. Oliver, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p532-536.

mad Karamouz, ed., 1992, p.532c-3-50.

Operation of Large Multireservoir Systems Using Optimal-Control Theory, Numan R. Mizyed, Jim C. Loftis and Darrell G. Fontane, WR July/Aug, 92, p.371-387.

Optimal Linear Segmented Structures with Variable Segment Boundaries, C. J. Goh and C. M. Wang, EM Dec. 92, p.326-2383.

p.2.16-2383.
 Stable Controllers for Instantaneous Optimal Control, J. N. Yang, Z. Li and S. C. Liu, EM Aug. 92, p1612-1630.
 Vibration Control of Highway Bridge Under Earthquakes, Zhikun Hou and Gongkang Fu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p176-179.

Optimal design
Bending of Thin Plate with Three-Point Support, Alexander Azarkhin, ST May 92, p1416-1419.

Characteristics of High-Speed Runway Exits for Airport Design, Antonio A. Trani, Antoine G. Hobeika, Byung J. Kim, Hisao Tomita and David Middleton, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24.

Design Optimization of Passively Cooled Room, Sydney C. K. Chu and Piyawat Boon-Long, EY Apr. 92, p18-37.

Design/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, J. M. Sloss, I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137.

Discrete Optimization of Structures Using Genetic Algo-rithms, S. Rajeev and C. S. Krishnamoorthy, ST May 92, p1233-1250.

Explicit Calculation of Pipe-Network Parameters, Paul F. Boulos and Don J. Wood, HY Nov. 90, p1329-1344.

Extended Management Modeling Framework for Optimal Reliability-Based Design with Sampling Decisions, James Uber, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p532-536.

Framework for Evaluation of Lunar Base Structural Concepts, Haym Benaroya and Mohammed Ettouney, AS Apr. 92, p187-198.

High Frequency Basin Irrigation Design for Upland Crops in Rice Lands, George J. Moridis and Manuel Alagcan, IR July/Aug. 92, p564-583.

Model for Optimal Design of Reinforced Concrete Beam, B. K. Chakrabarty, ST Nov. 92, p3238-3242.

Optimal Configuration for Fiber Reinforced Composites under Uncertainties of Material Properties and Loadings, Yoshisada Murotsu, Mitsunori Miki and Shaowen Shao, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p547-550.

Optimal Design for Plate Buckling, W. R. Spillers and Robert Levy, ST Mar. 90, p850-858.

Optimal Design of Parabolic Canals, G. V. Loganathan, IR Sept/Oct. 91, p716-735.

Optimal Design of Structures with Kinematic Nonlinear Behavior, S. Pezeshk, EM Apr. 92, p702-720.

Optimal Irrigation Delivery System Design under Uncertainty, Timothy K. Gates, Abdulmohsen A. Alshaikh, Samir I. Ahmed and David J. Molden, IR May/June 92, p433-449.

Optimal Upgrading of Hydraulic-Network Reliability, Lindell Ormsbee and Avner Kessler, WR Nov./Dec. 90, p784-802.

Optimum Center-Pivot Irrigation System Design with Tillage Effects, Y. Mohamoud, Thomas R. McCarty and Loyd K. Ewing, IR Mar/Apr, 92, p291-305. Optimum Design of Composite Hybrid Plate Girders, Balaur S. Dhillon and Chen-Hsing Kuo, ST July 91, p2088-2098.

Optimum Design of Laminated Composites, R. S. Salzar, F. W. Barton and R. D. Ramsey, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992). p1323-1334.

Optimum Geometries for Pier-Type Airport Terminals, S. Bandara and S. C. Wirasinghe, TE Mar./Apr. 92, p187-206.

Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

Plane Frame Optimum Design Environment Based on Genetic Algorithm, W. M. Jenkins, ST Nov. 92, p3103-3112.

p3103-3112.

Reliability-Based Optimization Using Sequential Quadratic Programming, Sankaran Mahadevan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p543-546.

Seepage Optimization for Trapezoidal Channel, A. R. Kacimov, R. July/Aug. 92, p520-526.

Simultaneous Design and Control of Stiffened Laminated Composite Structures, Luis Mesquita and Manohar P. Kamat, AS Jan. 92, p111-126.

Structural System Design under Uncertainty Via Pareto Optimization, Dan M. Frangopol and Minoru lizuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p551-554.

Systems Analysis in Ground-Water Planning and Man-agement, William W. -G. Yeh, WR May/June 92, agement, p224-237.

p224-231. Use of Mathematical Programming Methods for Complex Systems, James G. Uber, E. Downey Brill, Jr. and John T. Pfeffer, WR May/June 92, p281-294. Velocity and Depth of Flow Calculations in Partially Filled Pipes, A. Saatçi, EE Nov/Dec. 90, p1202-1208.

Adequacy of Surface Water-Supply Systems: Case Study, Krishan P. Singh, Sally M. Broeren and Ali Dur-gunoğlu, WR Nov/Dec. 92, p620-635.

gunogii, WR. Nov. Dec. 92, po.20-033. Expert System for Operating A Treated Water Supply System, Kent Keqiang Mao, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—in Search of Solutions, Mohammad Karamouz, ed., 1992), p867-871.

Planning and Management of Water-Resource Systems in Developing Countries, M. Miloradov, WR Nov./Dec. 92, p603-619.

Planning Operations of Bulk Loading Terminals by Simulation, Lal C. Wadhwa, WW May/June 92, p300-315.

ranon, Lai C. Wadhwa, WW May/June 92, p300-315.
Transportation Management in the Anacostia Waterfront Washington, D.C. Louis J. Slade, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p159-163.

Optimization

Application of Optimal Hydraulic Control to Ground-water Remediation, David Ahlfeld and Manoutch Heidari, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1243.

The Application of UNET to a Complex Channel Network, Marc C. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1148-1153.

Boundary-Element Direct Reanalysis for Continuum Structures, J. H. Kane, B. L. Keshava Kumar and R. H. Gallagher, EM Aug. 92, p1679-1691.

Comparison of Optimization Formulations for Waste-Load Allocations, Donald H. Burn and Barbara J. Lence, EE July/Aug. 92, p597-612.

Computer Modeling of Structural Systems for Residential Scale Buildings, Richard A. Ebeltoft, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p58-65

Computer-Aided Concrete-Placement Optimization, R. S. Phelan, F. Radjy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187.

Mar. 90, p172-187.

Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Faeh and Geraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1112-1117.

Concurrent Optimization of Large Structures. 1: Algorithms, Hojjat Adeli and Osama Kamal, AS Jan. 92, p79-90.

Concurrent Optimization of Large Structures. II. Applica-tions, Hojjat Adeli and Osama Kamal, AS Jan. 92, tions, H p91-110.

Design of Control Algorithm for Operation of Irrigation Canals, J. Mohan Reddy, Amadou Dia and Ahmed Oussou, IR Nov./Dec. 92, p852-867.

Designing Articulated Vehicles for Low-Speed Maneuver-ability, H. F. Chen and S. A. Velinsky, TE Sept./Oct. 92, p711-728.

Discrete Optimization of Structures Using Genetic Algorithms, S. Rajeev and C. S. Krishnamoorthy, ST May 92, p1233-1250.

Discussion of The Optimum Gravity Dam by J. M. Ra-phael, Raymond E. Davis, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p20-21.

ed., 1992, p.20-21.

An Expert System for Impeller Mechanical Design and Analysis, Wen Jeng Chen and Hong-Tsung Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.936-939.

Expert System May Lead to Custom-Made Concrete, CE June 92, p.30.

June 92, p.50.
Feedback Control of Basin-Irrigation System, A. J. Clemmens, IR May/June 92, p.480-496.
FRP-Reinforced Wood as Structural Material, Nikolaos Plevris and Thanasis C. Triantafiliou, MT Aug. 92, p.300-317.

ps00-317.

Graphical Object-Oriented Simulation System for Construction Process Modeling, L. Y. Liu and P. G. Ioannou, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl139-1146.

Hydraulic Design of Perforated Breakwaters, M. Fugazza and L. Natale, WW Jan./Feb. 92, pl-14.

and L. Natale, W. Jan. 190. 72, pl. 1-19. Hydropower, Water Quality and Waste Discharge, Shoou-Yuh Chang, Shu-Liang Liaw, Steven F. Rails-back and Michael J. Sale, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), -290, 282 p380-385.

Irrigation Timing for Wheat Based on Climate, Crop, and Soil Data, R. P. Tripathi, IR May/June 92, p370-381.

Management of Agricultural Drainage Pollution Considering Regional Cooperation, T. C. Lyons and M. E. Grismer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p448-455.

ed., 1992), p448-455.

Markov Decision Processes in Structural Optimization, Zongwei Tao, J. Hugh Ellis and Ross B. Corotis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-542.

Mechanics of Shape Optimization in Plate Buckling, Mahesh D. Pandey and Archibald N. Sherbourne, EM June 92, p1249-1266.

Minimum Weight Design of Structural Topologies, U. Kirsch and B. H. V. Topping, ST July 92, p1770-1785.

Multiobjective Analysis of Multireservoir System, S. Mohan and Diwakar M. Raipure, WR July/Aug. 92, p356-370. p356-370.

p336-370. Operational Strategies for Predenitrification Process, R. Jain, G. Lyberatos, S. A. Svoronos and B. Koopman, EE Jan. Feb. 92, p56-67. Optimal Aquifer Management for Controlling Land Subsidence, Theodore G. Cleveland and Lu-Chia Chuang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p872-877.

Optimal Design of Structures with Kinematic Nonlinear.

mad Karamouz, ed., 1992), p8/2-8/7.
Optimal Design of Structures with Kinematic Nonlinear Behavior, S. Pezeshk, EM Apr. 92, p702-720.
Optimal Discretization of Random Fields for SFEM, Chun-Ching Li and A. Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p29-32.

Y. K. Lin, ed., 1992), p29-32.

Optimal Flood Warning Threshold: A Case Study in Connellsville, Pennsylvania, Duan Li, Yacov Y. Haimes, Eugene Stakhiv and David Moser, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283.

Optimal Linear Segmented Structures with Variable Segment Boundaries, C. J. Goh and C. M. Wang, EM Dec. 92, p2376-2383.

Optimal Locations of Monitoring Stations in Water Dis-tribution System, Byoung Ho Lee and Rolf A. Dein-inger, EE Jan./Feb. 92, p4-16.

Optimal Long-Term Scheduling of Bridge Deck Replacement and Rehabilitation, Timothy L. Jacobs, TE Mar/Apr. 92, p312-322.

Optimal Pump Scheduling in Water-Supply Networks, Paul W. Jowitt and George Germanopoulos, WR July/ Aug. 92, p406-422.

Optimal Scheduling of Consecutive Landfill Operations with Recycling, Timothy L. Jacobs and Jess W. Everett, EE May/June 92, p420-429.

Optimization and Simulation of Multiple Reservoir Systems, Mohammad Karamouz, Mark H. Houck and Jacque W. Delleur, WR Jan./Feb. 92, p71-81.

Jacque W. Desiend, W. Pani-Ped. 92, p.11-81.
An Optimization Methodology for Crew Assignment
Based on Maximizing Labor Productivity, John A.
Kuprensa and Anthony D. Songer, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p.182-189.

Optimization Models for Groundwater Development, Robert Willis and Miquel Mariño, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1244.

Optimization of Discontinuous Fiber Composites, Victor C. Li, M. Maalej and T. Hashida, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1000-1003.

Optimization of Real-Time Hydrothermal System Opera-tion, William W.-G. Yeh, Leonard Becker, Shi-Qian Hua, De-Pu Wen and Jian-Min Liu, WR Nov./Dec. 92, p636-653.

Optimization-Availability-Based Design of Water-Distribution Networks, M. John Cullinane, Kevin E. Lansey and Larry W. Mays, HY Mar. 92, p420-441.

Optimizing Launch-on-Time Probability, George W. Morgenthaler, AS July 92, p369-386.

The Optimum Gravity Dam, Jerome M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p5-19.

Planning Centralized Materials Recovery Facilities, Renée A. Lawver and Jay R. Lund, (Environmental En-gineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p537-542.

Reliability-Based Optimization Using Sequential Quadratic Programming, Sankaran Mahadevan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p543-546.

Reservoir Operating Rules for Maximum Hydropower Production, Emmanuel U. Nzewi, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p543-548.

Reservoir Systems Analysis: Closing Gap Between Theo-ry and Practice, Slobodan P. Simonovic, WR May/June 92, p262-280.

Review of Ground-Water Quality Monitoring Network Design, Hugo A. Loaiciga, Randall J. Charbeneau, Lorne G. Everett, Graham E. Fogg, Benjamin F. Hobbs and Shahrokh Rouhani, HY Jan. 92, p11-37.

Risk Based Optimal Fatigue Testing, J. D. Sørensen, M. H. Faber and I. B. Kroon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p523-526.

isk Based Structural Optimization, Palle Thoft-Christensen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p535-538.

Risk-Costs for Scour at Unknown Bridge Foundations, G. Kenneth Young, Stuart M. Stein and Roy Trent, (Hy-draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111.

Shape Optimization of Arch Dams for Static and Dynamic Loads, Bofang Zhu, Bin Rao, Jinsheng Jia and Yisheng Li, ST Nov. 92, p2996-3015.

Ship Simulation of the Houston Ship Channel, Houston, Texas, Dennis W. Webb and J. Christopher Hewlett, (Ports '92, David Torseth, ed., 1992), p898-911.

Simulation of Reservoir Operation Using Smart Reservoirs, Jon S. Behrens, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992). Barry J. 6 p606-613.

Stability of Masonry Piers and Arches, Thomas E. Booth-by and Colin B. Brown, EM Feb. 92, p367-383.

Stochastic Simulation and Optimization of Irrigation Canal Network Flows, Timothy K. Gates, Abdelmohsen A. Alshaikh and Samir I. Ahmed, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p474-480.

Structural Optimization in a Distributed Computing Environment, B. K. Voon and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p778-785.

Systems Analysis in Ground-Water Planning and Management, William W. -G. Yeh, WR May/June 92, p224-237.

TMDS for Vibration Control of Systems with Uncertain Properties, Hector Jensen, Mehdi Setareh and Ralf Peek, ST Dec. 92, p3285-3296.

Use of Importance Sampling Constraints in System Optimization, Yingwei Liu and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p112-115.

Using Component Mode Synthesis and Static Shapes for Tuning TMDs, Mehdi Setareh, Robert D. Hanson and Ralf Peek, ST Mar. 92, p763-782.

Aggregation-Disaggregation Approach to Multireservoir Operation, Juan B. Valdés, Jenny Montbrun-Di Filip-po, Kenneth M. Strzepek and Pedro J. Restrepo, WR July/Aug. 92, p423-444.

A Chance Constrained Optimization Model Using Kinematic Wave Routing for Stormwater Infrastructure Rehabilitation, Timothy L. Jacobs and Miguel A. Medina, Jr., (Water Resources Planning and Management: Saring a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p748-753.

Conjunctive Optimization Models, Tom Maddock, III. and William W-G. Yeh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed.,

1992), p1242.

A Demand Driven Decision Support System for Opera-tion of Reservoirs, Haralambos V. Vsiliadis and Mohammad Karamouz, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Design of Tension Leg Platforms: A Knowledge Based Approach, John M. Niedzwecki and Oriol R. Rijken, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p.288-293.

Extended Experience with a Short-Term Hydropower Scheduling Model in New England, Paul H. Kirshen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p299-304.

Extended Management Modeling Framework for Optimal Reliability-Based Design with Sampling Decisions, James Uber, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p532-536.

Ground-water Policy-making Support: USEM Optimiza-tion Modeling Plus GIS and Graphics, Richard C. Peralta, Christopher M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza, Douglas Ramsey and Kurt Vest, (Ir-rigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992), p305-310.

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertainties of Sediment Transport Parameters, Carlos C. Car-riaga and Larry W. Mays, (Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p526-531

Modeling of a Large-Scale Water Distribution System, Nien-Sheng Hau, Peter W. F. Louie and William W-C, Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamour, ed., 1992, p598-603.

Optimal Capacity Expansion in Multi-Aquifer Systems, Hasan Yazucqil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p432

Optimization Model for Alternative Use of Different Quality Irrigation Waters, Javaid Afzal, David H. Noble and E. K. Weatherhead, IR Mar./Apr. 92, p218-

Optimization Model for Operation of Recharge Basins, Hasan Mushtaq, Larry W. Mays and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 3005-309.
Planning and Operation of a Multi-Reservoir Water Distribution System, Ali Diba, Peter W. F. Louie, Manouchehr Mahjoub and William W-G. Yeh, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p316-321.
Quasi-Three-Dimensional Optimization Model of Jakarta Basin, Brad A. Finney, Samsuhadi and Robert Willis, WR Jan.Feb. 92, p18-31.
Real-Time Operation of Tanshui River Reservoirs, Jan-Tai Kuo, Nien-Sheng Hsu, Wen-sen Chu, Shian Wan and Youn-Jan Lin, WR May/June 90, p349-361.

and Youn-Jan Lin, WR May/June 90, p349-361. Reliability of Operating Rules with or without Uncertain Forecasts, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p679-684. Systems Analysis in Water-Distribution Network Design: From Theory to Practice, I. C. Goulter, WR May/June 92, p238-248.

Oregon
Cleaning Up Chromium, W. Scott McKinley, Randy C.
Pratt and Loren C. McPhillips, CE Mar. 92, p69-71.

# Organic carbon

Organic Carbon TOC Removal by Coagulation and Softening, S. R. Qasim, S. A. Hasham and N. I. Ansari, EE May/June 92, p432-437.

## Organic chemicals

Organic chemicals
Integrated Remediation of Soil and Groundwater, Russell S. Dykes and Arlin C. Howles, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p244-249.
Permeation of Organic Chemicals Through HDPE Geomembranes, Joni P. Sakti, Jae K. Park and John A. Hoopes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p201-207.
A Preliminary Evaluation of the Advoration of Lindane.

Linaweaver, ed., 1992), p.201-207.

A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2,4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, P. S. Ho and W. F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.364-369.

Theory and Experiments on Subsurface Contaminant Sorption Systems, Kirk Hatfield, David Burris, Thom-as B. Stauffer and Joe Ziegler, EE May/June 92, p322-337.

Treatability Study of Granular and Biological Activated Carbon for Groundwater Containing Fenac, a Herbicide, Chen-yu Yen and Rong-Jin Leu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p104-109.

Organic compounds
Case History: TRE At a Refinery/Chemical Plant, Carol
L La Breche and Russell S. Dykes, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p555-560.
Conservative Tracers for the C-Well Hydraulic Testing,
Tonya Dombrowski, Gary Coates and Klaus J. Stetzenbach, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p1991-1996.
Field Analysis of Contaminated Sediments by Immunoas-

Commutee, 19921, p1991-1996. Field Analysis of Contaminated Sediments by Immunoassay, Deborah J. Mossman, Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p110-115.

Flux of Metals Between Sediment and the Water Column, N. S. Simon and K. O. Dennen, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p390-391.

ed., 1992), p390-391.
Inducer Compounds in the Enricher-Reactor Process, Roger W. Babcock, Jr., Chwen-Jeng Tzeng, Simlin Lau and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p468-473.

NonPolar Organics Toxicity in a Municipal Effluent, Carlos H. Victoria-Rueda, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p549-554.

A Preliminary Evaluation of Transport Mechanisms for Multiple Substrates in a Laboratory Column System, Zhihuai Kue and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p180-185.

p180-183. Treatment of Contaminated Groundwater Using Chemi-cal Oxidation, Mark E. Zappi, Beth C. Fleming and M. John Cullinane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1184-1189.

Organic losaling
Evaluation of Nitrogen Removal Utilizing RBC's Anoxic
Reactors, and Recycle, Paul A. Dombrowski and James
C. O'Shaughnessy, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p36-41.

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Organic matter
Co/Co Concept Applied to Compression of Peat, Patrick
J. Fox, Tuncer B. Edil and Li-Tus Lan, GT Aug. 92, p1256-1263.

Organization theory Implementation of TOM in Building Design and Con-struction, Gerald W. Chase and Mark O. Federle, ME Oct. 92, p329-339.

Oct. 72, p3.29-399.
Management's Fatal Flaw: TQM Obstacle, William M. Hayden, Jr., ME Apr. 92, p122-129.
Organizational Design: Some Helpful Notions, Melville Hensey, ME July 90, p262-269.

Hensey, ME July 90, p262-269.

Organizational policy
Competition Leads to Losing, Frank Pierce Johnson, ME
July 90, p258-261.

Quality Management Organizations and Techniques,
James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

A Vision for Planetary Exploration, John F. Connolly,
Robert K. Callaway, Mark K. Diogu, Gene R. Grush,
E. Mason Lancaster, William C. Morgan, David A.
Petri, Barney B. Roberts, Lester A. Pieniazek, Thomas
M. Polette and Larry D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),
p2188-2195. p2188-2195.

p2188-2195.

Organizations
Organizational Design: Some Helpful Notions, Melville Hensey, ME July 90, p262-269.
Overview of the Radioactive Waste Management Programme of the OECD/NEA, Jean-Pierre Olivier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p52-56.

Orozco, Jose Vicente Jose Orozco, Dead at 88, Was Dam Engineer in Mexico, NE June 92, p5.

Orthotropic Orthotropic Bridge Decks, Ali Touran and Alex Okereke, CF May 91, p134-148.

Secondary Stresses in Closed Orthotropic Deck Ribs at Floor Beams, Roman Wolchuk and Alexis Ostapenko, ST Feb. 92, p582-595.

Stiffened Sheathings of Orthotropic Cylindrical Shells, P. Rigo, ST Apr. 92, p926-943.

Orthotropic models

An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, Y. Wang and R. K. N. D. Rajapakse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1008-1011.

Orthotropic plate

Analysis of Thick Circular Plates Undergoing Large Deflections, M. Gorji, J. A. Abuyan and K. S. Y. Li, AS

Jan. 92, plas-153.

Polar Orthotropic Circular Plates—
Mahesh

Postbuckling of Polar Orthotropic Circular Plates— Retrospective, Archibald N. Sherbourne and Mahesh D. Pandey, EM Oct. 92, p2087-2103.

## Oscillations

A Dual Approach to Low Frequency Energy Definition in a Small Craft Harbor, Chuck Mesa, (Coastal Engineer-ing Practice '92, Steven A. Hughes, ed., 1992), p400-411.

Ice Loads on Vertical Bridge Pier at Two Different Model Scales, F. T. Christensen and P. Klinting, CR Sept. 92, p93-110.

Nonlinear Stability of Differential Surge Chambers, Xiao-Liang Yang and Chen-Shan Kung, HY Nov. 92, p1526-1539.

Numerical Modeling of Proposed Kawaihae Harbor, HI, Linda S. Lillycrop and Stanley J. Boc, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),

neering Practice p412-424.

p412-424.

de St. Venant Modelling in the Irrigation Environment, Ehab A. Meselhe and Forrest M. Holly, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1124-1129.

Watter-Level Oscillations in Esperance Harbour, Michael L. Morison and Jörg Imberger, WW July/Aug. 92, p352-367.

p332-367.

Oscillators

Analog Electronic Simulations of a Nonlinear System, R. Valery Roy and Eric Nauman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p668-671.

Bifurcations and Chaos in Structural Control, K. Hackl, A. Cheng, C. Y. Yang and M. Chajes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p664-667.

Equivalence Between Motions with Noise-Induced Jumps and Chaos with Smale Horseshoes, Michael Frey and Emil Simiu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p660-663.

Harmonic Excitation of an Unconstrained Saturated Particle Bed, Harri K. Kytömaa and Charles C. Abnet,

Harmonic Excitation of an Unconstrained Saturated Particle Bed, Harri K. Kytömaa and Charles C. Abnet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p640-643.
Nonlinear System under Non-Gaussian Impulsive Noise Excitation, G. Q. Cai and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p148-151.
Reliability Analysis of Degrading Elasto-Plastic Oscillators, Igor Rychlik and Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p304-307.
Responses of Bilinear and Impacting Systems Subjected to Regular Waves, Somchai Sumanuskajonkul and Sau-Lon James Hu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p196-199.

Responses of Nonlinear Oscillators Excited by Non-Gaussian Pulse Processes, Sau-Lon James Hu, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p144-147.

Oscillatory flow
Behavior of Thermal Wedges in Oscillating Reservoir
Flow: A Case Investigation, Vahid Alavian, Neil Sutherland and Ming Shiao, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p501-506.

pSU1-300. Flow Field Induced by Sea Waves Over Brick-Pattern Ripples, G. Vittori, HY Sept. 92, p1241-1259. Lagrangian Motions in Simple Kinematic Oscillatory Flow Field, Kuo-Chuin Wong, WW Jan./Feb. 91, p29-

Outfall sewers
Design Procedures for Effluent Discharge to Estuaries
During Ebb Tide, Tony Webb and Rodger B. Tomlinson, EE May/June 92, p338-362.

During Ebb Tide, Tony weeb and Rouger D. Romanson, EE May/June 92, p338-362.

Dry Weather Field Screening as an Indicator for Urban
Drainage System Rehabilitation, Hans J. Peterson and
William R. Grout, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p516-522.

Microorganism Survival in Ice-Covered Marine Environment, S. J. Stanley, D. W. Smith and G. D. Milne, CR
June 92, p58-72.

Mixing, Dispersion, and Resuspension in Vicinity of
Ocean Wastewater Plume, Libe Washburn, Burton H.
Jones, Alan Bratkovich, T. D. Dickey and Ming-Sue
Chen, HY Jan. 92, p38-58.

OUTFL—A Spreadsheet for Design of Adequate Storm
Drainage Outfalls, Oner Yucel and Edward L. Lowman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p707-712.

Perils of Point Loma, John Prendergast, CE Nov. 92,

peris of Point Lonna, John Testoscape p62-65. Simplified Design of Multi-Stage Outfalls for Urban De-tention Basins, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p861-866.

umerical Solution of Muskingum Equation, Moham-mad Akram Gill, HY May 92, p804-809.

Overburdea
Three-Dimensional Analytical Techniques for Assessing
Overburden Toxicity as a Decision-Making Tool for
Reclaimability Determinations, L. A. Parsons, K. Kirk
and A. Wilhelm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), p839-845.

Strength Parameters for Cut Slope Stability in "Marine" Sediments, J. L. M. Clemente, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p865-875.

Overconsolidated soils

Effect of Soil Plasticity on Cyclic Response, Mladen

Vucetic and Ricardo Dobry, GT Jan. 91, p89-107.

Effects of K<sub>0</sub> and Overconsolidation on Uplift Capacity,

Adel Hanna and Ashraf Ghaly, GT Sept. 92, p1449
1469.

The Mechanical Aging of Soils, John H. Schmertmann, GT Sept. 91, p1288-1330.

Application of a Boundary Fitted Coordinate Mass Transport Model, Daniel L. Mendelsohn and J. Craig Swanson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p382-404.

p382-404.

Balancing Hydraulic Requirements for Storage and Diversion in Planning Subsurface Facilities for the Control of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.

Baltimore Waste Water Infrastructure a Health Plan, George G. Balog, Gary A. Wyatt and Edward Serp, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p429-432.

Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, Raymond M. Wright, Igor Runge, Rajat Roy Chaudhury and Daniel W. Urrish, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467. source—In Search of So Karamouz, ed., 1992), p462-467

source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467.

CSO Abatement for Gloucester Harbor in Massachusetts, Jon R. Pearson, Donald J. Chelton and Michael P. Colins, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1240-1241.

CSO Rehabilitation Strategies for Urban Areas, Larry A. Roesner and Edward H. Burgess, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p654-660.

Management of Portland's Combined Sewer System, Claudia L. Zahoruak, Lester E. Lee and Gordon A. Nicholson, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p468-473.

Modeling of CSO Impacts in Jamaica Bay and Tributaries, John P. St. John, William M. Leo and Robert Gaffoglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-95.

Oakland Braces for Storm Overflows, CE Nov. 92, p23, 263 an Francisco Plans Wastewater Storage Tunnel, CE Oct. Pot. 1992, p22, 24.

Sizing Stormwater Detention Reservoirs to Reduce Peak Flows, Bruce M. McEaroe, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p719-724.

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Using Simple Models to Evaluate Complex Storm Effects, Paul L. Freedman and John K. Marr, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-89.

WSPRO, A Model for Water-Surface PROfile Computa-tions, James O. Shearman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p865.

## Overland flow

Beginning of Motion for Selected Unanchored Residue Materials, John E. Gilley and Eugene R. Kottwitz, IR July/Aug. 92, p619-630.

Calibrating SHE Soil-Erosion Model for Different Land Covers, J. M. Wicks, J. C. Bathurst and C. W. Johnson, IR Sept./Oct. 92, p708-723.

Fractal Concept Used in Time-of-Concentration Esti-mates, Gert Aron, James E. Ball and Thomas A. Smith, IR Sept./Oct. 91, p635-641.

Frictional Resistance of Overland Flow on Tropical Turfed Slope, Yee-Meng Chiew and Soon-Keat Tan, HY Jan. 92, p92-97.

Hydraulic Roughness Coefficients for Native Rangelands, Mark A. Weltz, Awadis B. Arslan and Leonard J. Lane, IR Sept./Oct. 92, p776-790.

Kinematic Wave Controversy, Victor M. Ponce, HY Apr. 91, p511-525.

Modeling Shallow Overland Flow in Surface Irrigation, B. L. Maheshwari and T. A. McMahon, IR Mar./Apr. 92,

p201-217. Unit Hydrograph Derivation Using Geographic Informa-tion System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12.

## Overloads

Bridge Overloading Criteria, Michel Ghosn, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p575-578.

Live Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nasaif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

On the Fatigue Loading for Local Components, Akhilesh Chandra Agarwal, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed.,

1992), p583-586.

Statistical Evaluation of Truck Overloads, Jamshid Mohammadi and Nadir Shah, TE Sept./Oct. 92, p651-

Overpasses

Exact Minimum Sight Distance on Sag Curve with Centered Overpass, Said M. Easa, TE July/Aug. 92, p588-592.

Overtopping
Dams Going Safely over the Top, R. Lee Wooten, George
R. Powledge and Stephen L. Whiteside, CE Jan. 92,
p52-54.

Dutch Experience on Design of Dikes and Revetments, Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p794-813.

Evaluating Spillway Adequacy, John K. Hawk, CE May 92, p74-76.

Inner Harbor Wave Conditions due to Breakwater Over-topping, Fredric Raichlen, Jack C. Cox and Jerald D. Ramsden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p425-446.

Hugnes, ed., 1725, 1725, 1726,

Overtopping Protection Using Roller-Compacted Concrete, Harry E. Jackson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1216-1221.

Sea Defence System at Herne Bay, England, J. H. de Vroeg, J. van Overeem, A. G. Roberts and M. R. Bock, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p90-103.

Stability of Overtopped Embankment Dams, Ashok K. Chugh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p414-428.

Structural and Non-Structural Alternatives for Accommodating Larger Floods at Dams, Louis E. Buck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1228-1233.

Ethical, Legal and Professional Responsibilities of Engineers to Owners and Contractors, Lawrence I. Erdos, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p989-1002.

Howdy, Partner, Paul Tarricone, CE Mar. 92, p72-74. Introduction to Ownership and Transition. I: Ownership Transfer Considerations, Robert E. Olden, ME Oct. 92, p367-375.

Introduction to Ownership and Transition. II: Succession and Firm Valuation, Robert E. Olden, ME Oct. 92, p376-383.

Overhead and Profit on Change Orders, Hamid Sarvi, CE Aug. 92, p59-61.

Owner Involvement in Construction Projects in Saudi Arabia, Abdulaziz A. Bubshait and Abdulaziz A. Al-Musaid, ME Apr. 92, p176-185.

Owners Must Justify Damage Amounts, CE June 92, p31. An Owner's Viewpoint: Changes Needed, Terry W. Towle, CE May 92, p6.

Predicting Construction Contractor Failure prior to Con-tract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

Promoting Private Irrigation Development: The Irriga-tion Sector Program Experience in Nepal, Richard Reidinger and Upendra Gautam, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p221-226.

Risk Analysis Approach to Selection of Contractor Evalu-ation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821. Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371. Underwriting Process for Construction Contract Bonds, Jeffrey S. Russell, ME Jan. 92, p63-80.

Behaviour of Used CANDU Fuel Stored in 150°C Mois-ture-Saturated Air, K. M. Wasywich and C. R. Frost, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1166-1173.

Dissolution Rates of As-Received and Partially Oxidized Spent Fuel, W. J. Gray and L. E. Thomas, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1458-1464.

pl458-1464.

Effects of Pre-Oxidation on In-Line Filtration: Particle and Manganese Removal, John E. Tobiason and Nagaraju K. Vinod, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p520-525.

The Influence of Moisture on Air Oxidation of UO2: Calculations and Observations, Peter Taylor, Robert J. Lemire and Donald D. Wood, (High Level Radioactive Waste Management Program Committee, 1992), p1442-1448.

Oxidation of Bromide by Hypochlorous Acid in Aqueous

Management Program Committee, 1992), p1442-1448.
Oxidation of Bromide by Hypochlorous Acid in Aqueous Solutions: Stoichiometry and Kinetics, N. Phillip and V. Diyamandoglu, (Environmental Engineering, Soutions, F. Pierce Linaweaver, ed., 1992), p634-639.
Oxidation of Spent Fuel in Air at 175 to 195°C, R. E. Einziger, L. E. Thomas, H. C. Buchanan and R. B. Stout, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1449-1457.
Remediation of VOCs in Water Using UV/Oxidation,

Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p98-103.

Solubility of Uranyl in Brine, Hiromichi Yamazaki, Vas-silios Symeopoulos, Bo Lagerman and Gregory R. Choppin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1607-1611.

Analysis of Two Lunar Oxygen Production Processes, Laura Hernandez and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p576-585.

Apollo I I Ilmenite Revisited, E. N. Cameron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), D2423-2433.

1992), p2423-2433.
Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1139-1149.
Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p774-785.

miner, ed., 1992), p774-785.
Estimating VOC Emission Rates in Aeration Systems, Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p73-78.

1992, p.75-78.
Evaluation of Processing Options for Lunar Oxygen Production, Andrew Hall Cutler and Robert D. Waldron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.704-713.

Miller, ed., 1992), pr04-113.
The Feasibility of Processes for the Production of Oxygen on the Moon, Lawrence A. Taylor and W. David Carrier, III., (Engineering, Construction, and Operations in Space III., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p752-762.

Russell J. Millet, ed., 1992, p. 9732-102. Genesis: The Creation of a Lunar Base, Paul Bialla, Nathan Nottke and Seishi Suzuki, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Millet, ed., 1992), p.13-

An Integrated Human/Plant Metabolic Mass Balance Model, A. B. Thompson, J. R. Schulz and C. G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1777-1788.

Miller, ed., 1992.), p1777-1788.
Internal Pressure in a Lunar Inflatable Structure, Jeffrey Janakus, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992.), p2306-2366.
Intra Vena Cava Balloon Pumping, Tin-Kan Hung, Thomas E. Natan, Hua-qiang Li, Frank R. Walters and Brack G. Hattler, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p709-712.

Linar Base Pressure, O<sub>2</sub> Fraction, and ExtraHabitat Activity Suit Design, George W. Morgenthaler, Edward G. Barrett, Dale A. Fester and Carolyn G. Cooley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed. Stein Sture, ed. and Russell J. Miller, ed., 1992), p1720-1727.

Lunar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

Lunar Oxygen—The Reduction of Glass by Hydrogen Carlton C. Allen, David S. McKay and Richard V

Cariton C. Ailen, David S. McKay and Richard V. Morris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p629-640.

A Modified Sulfate Process to Lunar Oxygen, Thomas A. Sullivan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p641-650.

On the Beneficiation and Comminution of Lunar Rego-lith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138.

Production of Lunar Oxygen, Iron, Magnesium, and Sili-con by Aqueous Hydrofluoric Acid Leaching, William N. Agosto, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p678-689.

390

Production of Oxygen by Electro-Reduction of Lunar Ores, B. Mishra, D. L. Oison, J. J. Moore and W. A. Averill, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677.

Russell J. Miller, ed., 1992), p666-677.

Recent Developments of the Carbotek Process for Production of Lunar Oxygen, Christian W. Knudsen, Michael A. Gibson, David J. Brueneman, Seishi Suzuki, Tetsuji Yoshida and Hiroshi Kanamori, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p597-605.

Space Station & Lunar/Mars Life Support Research, Win-ston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 690-1700.

Kussell J. Miller, ed., 1992), p1690-1700.
Steady State Composition with Low Fe2\* Concentrations for Efficient O2 Production by "Magma" Electrolysis of Lunar Soils, Larry A. Haskin and Russell O. Colson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p651-665.

Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, D. W. Ming, D. C. Golden and D. L. Henninger, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1921),

p1709-1719.

Oxygen content Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.

May 92, pos-oo.
Water Quality Modelling: Prediction of the Transport of
Water Constituents in the Weser Estuary (Germany,
Agmar Müller, Iris Grabemann and Bernhard Kunze,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Gas Phase Control for Oxygen-Activated Sludge, R. C. Clifft, EE May/June 92, p390-401.

Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

Alternative Fuels and Their Relations to TCM's for Santa Barbara County, Mahesh Talwar, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p327-346.

Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Sol-vent Substitutes, Benerito S. Martinez, Jr., Ricardo B. Jacquez and Walter H. Zachritz, II., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p169-174.

Evaluation of Ozone Disinfection Systems: Characteristic Time T, O. Lev and S. Regli, EE Mar./Apr. 92, p268-

Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.

Global Change: Geoengineering and Space Exploration, Lyle M. Jenkins, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2072-2081.

Measuring Ozone by Indigo Method: Interference of Sus-pended Material, Mary E. Williams and Jeannie L. Darby, EE Nov./Dec. 92, p988-993.

Roundtable Discussion Sessions, Thomas Wholley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p271-275.

Painting
Realistic Specifications for Steel Bridge Painting, LuhMaan Chang and Machine Hsie, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p299-310.
Safeguarding Steel, Rita Robison, CE Apr. 92, p50-53.

Modeling Monsoon-Affected Rainfall of Pakistan by Point Processes, Thian Yew Gan and Zahoor Ahmad, WR Nov./Dec. 92, p671-688.

Paleogeology
Paleohydrologic Implications of the Stable Isotopic Composition of Secondary Calcite Within the Tertiary Volcanic Rocks of Yucca Mountain, Nevada, Joseph F. Whelan and John S. Stuckless, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581.

Something Fishy in the Subways, CE Dec. 92, p8.

Panets
The Analysis Related to the Impact of Composite Panels,
Ronald Perry, Anthony Palazotto and Raghbor Sandhu, (Engineering. Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), pl 286-1296.
Behavior of Isotropic R/C Bridge Decks on Steel Girders,
I.-K. Fang, J. Worley, N. H. Burns and R. E. Klingner,
ST Mar. 90, p659-678.
Construction of Urusua-I RCC Dam. Juan Buchas and

Construction of Urugua-I RCC Dam, Juan Buchas and Fotio Buchas, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p258-271.

1992), p.258-27.
Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultruded Fiber-Reinforced Plastics Beams in Industrial Building Construction, Ethan A. Love and Tanongsak Bisarnsin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584.

Modeling and Analysis of Doubly Curved Aerobrake Truss Structures, Gregory Washington and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p933-944.

Miller, ed., 1992), p933-944.
Nonlinear Geometric and Material Considerations in Shell Structures, S. A. Schimmels and A. N. Palazotto, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p548-551.
Postbuckling Behavior of Stiffened Composite Shell Panels, S. Sridharan, A. Kasaji and M. Zeggane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p648-651.
Postbuckling Besponse, Simulations of Laminated Aniso.

Niedzwecki, ed., 1992), p648-651.

Postbuckling Response Simulations of Laminated Anisotropic Panels, Ahmed K. Ncor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Reduced Basis Technique for Nonlinear Vibrations of Composite Panels, Ahmed K. Noor, C. M. Andersen and Jeanne M. Peters, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883.

peact-oss.
Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.

Seismic Panel Zone Design Effect on Elastic Story Drift in Steel Frames, Keb-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

S1 Dec. 90, p3283-3301.
Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, EM Aug. 92, p1661-1678.
Structural Studies of Two Aerobrake Heatshield Panel Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932.
Transverse Shear Effect on Eluties of Composite Panels.

Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.

Paper mills

Modal and Response Analyses of a Paper Machine Foundation, Jerry Chen and J. A. Bohinsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p574-581.

Parabolic bodies
Optimal Design of Parabolic Canals, G. V. Loganathan, IR Sept./Oct. 91, p716-735.

Parallel processing
Adaptive and Parallel Methods for Nonlinear Solid Mechanics, T. Belytschko, L. P. Bindeman, H. Y. Chiang,
E. J. Plaskacz and I. S. Yeh, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1902), 2-27. 1992), p27-41.

Application of Neural Network to Groundwater Remediation, J. H. Garrett, Jr., S. Ranjithan and J. W. Eheart, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p259-267.

sentation, Robert H. Allen, ed., 1992, p.239-207.
Aspects of Parallel Processing in Reservoir Simulation, Richard Ewing, Patrick O'Leary and James Sochacki, Gengineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.111-114.
Coarse-Grain Parallel Computing Using ISIS Tool Kit, Raiph Finch and Shao-Kong Kao, CP Apr. 92, p.233-

Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, 0-87262-869-8, 1260pp.

Concurrent Optimization of Large Structures. I: Algorithms, Hojjat Adeli and Osama Kamal, AS Jan. 92, p79-90.

Concurrent Optimization of Large Structures. II. Applica-tions, Hojjat Adeli and Osama Kamal, AS Jan. 92, tions, H p91-110.

LAN Ho! Structural Analysis on a Network, Suresh K. Sharma and John W. Baugh, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p639-646.

1992, p639-646.
Massively Parallel Computing, C++ and Hydrocode Algorithms, Allen C. Robinson, Arlo L. Ames, H. Elot Fang, Dino Pavlakos, Courtenay T. Vaughan and Philip Campbell, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p313-526.

Neural Networks, J. H. Garrett, Jr., J. Ghaboussi and X. Wu, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p104-143.

Nonlinear Structural Analysis on a Distributed System, Eric M. Lui and Fred H. Schlereth, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p647-654.

Object-Oriented Programming for Scientific Codes. I: Thoughts and Concepts, T. J. Ross, L. R. Wagner and G. F. Luger, CP Oct. 92, p480-496.

G. F. Luger, CP Oct. 92, p480-496.

Object-Oriented Programming for Scientific Codes. II:
Examples in C++, T. J. Ross, L. R. Wagner and G. F.
Luger, CP Oct. 92, p497-514.

Parallelisation of a Distinct Element Stress Analysis Program, Siong K. Tang, Gregory K. Egan and Michael A.
Coulthard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p770-777.

Parallelism Obiect Oriented Programming Methods.

Parallelism, Object Oriented Programming Methods, Portable Software and C++, I. G. Angus, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p506-513.

ed., 1992), p506-513.

Parallelization of Linear Finite Element Analysis, Gwolong Lai and Hsin-Chu Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p655-662.

Seismic Wave Propagation by Finite Differences on the Connection Machine, Jacek Myczkowski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p115-118.

Time Series Prediction Using Neural Networks, James Villarreal and Paul Baffes, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p268-282.

Calibration Strategy for Urban Catchment Parameters, Yaacob Ibrahim and Shie-Yui Liong, HY Nov. 92, p1550-1570.

Derivation of Infiltration Equation Using Systems Approach, V. P. Singh and F. X. Yu, IR Nov/Dec. 90, p837-858.

Dynamic Parameters Analysis of Piles, Xiao M. Zhu, Hsien P. Niu and Suo X. Zhang, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p224-240.

Explicit Calculation of Pipe-Network Parameters, Paul F. Boulos and Don J. Wood, HY Nov. 90, pl 329-1344. Forecasting Instabilities in Groundwater Parameters, Fethi Ben-Jemaa and Miguel A. Mariño, (Water Resources Planning and Management: Saving a Threatmend Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p90-95.

Karamouz, ed., 1992), p90-93.

Generalized State Parameter for Partly Saturated Soils, N. S. Pandian, T. S. Nagaraj and G. L. Siva Kumar Babu, GT Apr. 92, p622-627.

Impact of Variability in Pavement Parameters on Backcalculated Moduli, Jessica Rodriguez-Gomez, Carlos Ferregut and Sobeil Nazarian, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p261-275.

List of Sea-State Parameters, IAHR Working Group on Wave Generation and Analysis, WW Nov./Dec. 89, p793-808.

Macro Wind Parameters for Load Combination, Christo-pher A. Belk and Richard M. Bennett, ST Sept. 91, pher A. Bell p2742-2756.

Modified Vlasov Model for Beams on Elastic Founda-tions, C. V. Girija Vallabhan and Y. C. Das, GT June 91, p956-966.

Multiparameter Bidding System—Innovation in Contract Administration, Zohar Herbsman and Ralph Ellis, CO Mar. 92, p142-150.

Mar. 94, p14-2-10.
Mutual Residual Energy Method for Parameter Estimation in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, ST Jan. 92, p223-242.
Normalizing Inelastic Seismic Response of Structures Having Eccentricities in Plan, Michel Bruneau and Stephen A. Mahin, ST Dec. 90, p3358-3379.

Parameter Estimation in Complex Linear Structures, M. R. Banan, M. Banan and K. D. Hjelmstad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p571-574.

Recursive Parameter Estimation for ARMA Simulations, Bingqi Miao, EM Dec. 92, p2484-2490. Bingqi Miao, EM Dec. 92, p2484-2490. Bingqi Miao, EM Dec. 92, p2484-2490. Chastic Excitation, H. Jensen and W. D. Iwan, EM May 92, p1012-1025.

 Juli 2-1023.
 Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Sem-prini and Paul V. Roberts, EE Sept./Oct. 92, p666-689.
 Systems Analysis in Ground-Water Planning and Man-agement, William W. -G. Yeh, WR May/June 92, 2324-232. agement, p224-237.

Farapets
Revised Hydraulic Design of the Los Angeles County
Flood Control System, Michael E. Mulvihill and Scott
E. Stonestreet, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612617

Parking facilities
Rehabilitation of Chloride Damaged Concrete, Christopher P. Hodges, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491.

Partially saturated soils
Settlement and Moisture Movement in Collapsible Soils,
Mostafa El-Ehwany and Sandra L. Houston, GT Oct. 90, p1521-1535

Particle distribution

A Distributed Particle Simulation Code in C++, David W. Forslund, Charles Wingate, Peter Ford, J. Stephen Junkins and Stephen C. Pope, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518.

Routing Debris Flows with Particle Segregation, Tamotsu Takahashi, Hajime Nakagawa, Tatsuo Harada and Yousuke Yamashiki, HY Nov. 92, p1490-1507.

Collisional Restitution Dependence on Viscosity, Jan Lundberg and Hayley H. Shen, EM May 92, p979-989. Diffuse Double-Layer Equations in SI Units, Albert T. Yeung, GT Dec. 92, p2000-2005.

Empirical Estimation of Double-Layer Repulsive Force between Two Inclined Clay Particles of Finite Length, Ning Lu and A. Anandarajah, GT Apr. 92, p628-634. Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. I: Theory, Ching S. Chang, Yang Chang and Mohammed G. Kabir, GT Dec. 92, p1959-1974.

icromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, Ching S. Chang, Mo-hammed G. Kabir and Yang Chang, GT Dec. 92,

392

p1975-1992.

Particle motion

3-D Particle Tracking for the New York Bight, Raymond S. Chapman and Mark S. Dortch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p26-35.

Particle Motion in Rotary Screen, Richard Ian Stessel and S. C. Kranc, EM Mar. 92, p604-619.

The Potential Fate of Particulate Contaminants from the Rehabilitated Ranger Uranium Mine, S. J. Riley and P. W. Waggitt, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p884-889.

Particle reason.

Determining Velocity Gradient in a Flocculation Basin—A Case Study, Christopher H. Yu, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 953-598.

Particle size

Effect of Particle Contact Bond on Shear Modulus, Tzyy-Shiou Chang and Richard D. Woods, GT Aug. 92, p1216-1233.

Information Theory in Risk Analysis, James D. En-glehardt and Jay R. Lund, EE Nov./Dec. 92, p890-904. Relative Compaction of Fill Having Oversize Particles, Robert W. Day, GT Oct. 89, p1487-1491.

Sinkholes in Dams of Coarse, Broadly Graded Soils (Paper introduced by Jean Lafleur), James L. Sherard, (Embankment Damu—James L. Sherard Contribu-tions, Sukhanander Singh, ed., 1992), p312-323.

tions, Sukhanander Singh, ed., 1992), p312-323.

Particle size distribution
Basic Properties of Sand and Gravel Filters (Paper introduced by James R. Talbot), James L. Sherard, Loin P.
Dunnigan and James R. Talbot, (Embankment
Dams—James L. Sherard Contributions, Sukhanander
Singh, ed., 1992), p366-383.

Mobilization and Removal of Contaminants Associated
with Urban Dust and Dirt, Brian A. Dempsey, YuanLiang Tai and Stuart Harrison, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p486-491.

On the Particle Size Distribution of Crushed Spent Fuel,
P. C. Reardon, Y. R. Rashid and G. S. Brown, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p137-142.

Particles

3-D Particle Tracking for the New York Bight, Raymond S. Chapman and Mark S. Dortch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p26-35.

Bed-Load Transport on Transverse Slope. I, Masato Sek-ine and Gary Parker, HY Apr. 92, p513-535. Computational Laboratory for Discrete Element Geome-chanics, John M. Ting and Brent T. Corkum, CP Apr.

92, p129-146.

Drag Coefficient and Fall Velocity of Nonspherical Parti-cles, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY May 91, p660-667.

Ona, 11 May 1, poot-ool:
Empirical Estimation of Double-Layer Repulsive Force
between Two Inclined Clay Particles of Finite Length,
Ning Lu and A. Anandarajah, GT Apr. 92, p628-634.
Evaluation of Fine Aggregate Particle Shape and Texture,
E. R. Brown, P. S. Kandhal and James W. Winford, Jr.,
(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), p216-230.

Harmonic Excitation of an Unconstrained Saturated Particle Bed, Harri K. Kytömaa and Charles C. Abnet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p640-643.

Influence of Gas Phase Turbulence on the Transport of Particles, Jennifer L. Sinclair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042.

1992), p1039-1042. Light-Scatter Particle Counting: Improving Filtered-Water Quality, Carrie M. Lewis and David H. Manz, EE Mar/Apr. 91, p209-223. Mechanics of Saltating Grains. II, Masato Sekine and Hideo Kikkawa, HY Apr. 92, p536-558. Motion of Contact-Load Particles at High Shear Stress, Fidelia N. Nnadi and Kenneth C. Wilson, HY Dec. 92,

p1670-1684.

Relative Compaction of Fill Having Oversize Particles, Robert W. Day, GT Oct. 89, p1487-1491.

RODER W. Day, Of Oct. 89, p1487-1491.
Shear-Band Analysis in Idealized Granular Material, J. P.
Bardet and J. Proubet, EM Feb. 92, p397-415.
Transport of Low-Level Radioactive Soil at Deep-Ocean
Disposal Site, James S. Bonner, Carlton D. Hunt, John
F. Paul and Victor J. Bierman, Jr., EE Jan./Feb. 92,
p101-119.

Particulate alr pollutants
Theory of Chaos and Radionuclide Distribution, E. A.
Yfantis, G. Miel and G. M. Gallitano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2339-2343.

Characterization of Granular Material Composite Struc-tures Using Computerized Tomography, Xiaogong Lev William C. Dass and Charles W. Manzione, Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p268-271.

Niedzwecki, ed., 1992), p268-271. Elastoplastic Deformation for Particulates with Frictional Contacts, Ching S. Chang, Anil Misra and Koff Acheampong, EM Aug 92, p1692-1707.
Micromechanics and Effective Properties of Elastic Particulate Composites, J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p95-98.

A More Rational Approach to Pavements, Milton E. Harr, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),

The Potential Fate of Particulate Contaminants from the Rehabilitated Ranger Uranium Mine, S. J. Riley and F. W. Waggitt, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-hultons, Mohammad Karamouz, ed., 1992), p884-889.

Caltrans/Private Sector Partner Pile Load Test, CE Oct. 92, p15,18.

Corps Seeks Industry Partners, CE Feb. 92, p12. Engineers Form Partnership to Pursue Global Initiatives, CE May 92, p81-82.

ČE May 92, p81-82.

Florida Picks a Partner, CE May 92, p20-21.

Florida Picks a Partner, CE May 92, p20-21.

Frontloading for Successful Team-Built Projects, Louis J. Martinez, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p504-507.

Give Partnering a Chance (Itr), Ronald B. Sieger, David Roberts and Lynn White, CE Sept. 92, p36.

Howdy, Partner, Paul Tarritone, CE Mar. 92, p72-74.

A Novel University-Industry-Government Partnership, Constantine N. Papadakis, Paul C. Claspy, Theo G. Keith and Michael J. Salkind, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2128-2135.

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p58-71.

Resenger transportation

Bagage System Implementation at DIA, Louis S. Nelson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p235-238.

The Design of the Airside Concourses, James M. Suehiro, Edward K. McCagg and J. M. Seracuse, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p207-216.

Passenger vehicles Controlled Braking on Uneven Roads, Dieter Ammon, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p65-68.

Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.

Passive control

Aseismic Hybrid Control of Nonlinear and Hysteretic Structures I, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1423-1440.

Aseismic Hybrid Control of Nonlinear and Hysteretic Structures II, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1441-1456.

Vibration Control of Beams by Beam-Type Dynamic Vi-bration Absorbers, Tadayoshi Aida, Susumu Toda, Norio Ogawa and Yasuo Imada, EM Feb. 92, p248-258.

Wind Effects on Base-Isolated Structures, Yu Chen and Goodarz Ahmadi, EM Aug. 92, p1708-1727.

Passive earth pressure

Interslice Force Functions for Limit Equilibrium Analysis, Harianto Rahardjo, Delwyn G. Fredlund and Ken K. Fan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p325-341.

Seismic Passive Resistance of Tied-Back Walls, I Richards, Jr. and D. G. Elms, GT July 92, p996-1011.

Alkaline Sludge Stabilization: A "Quick Fix" and Long Term Sludge Management Option for Burlington, North Carolina, Stephen R. Shoaf, Morris V. Brookhart and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p399-404.

Pavement condition

Airfield Pavement Creep Failure Investigation, John C. Potter, CF Aug. 92, p177-184.

The Connecticut Photolog Laser Videodisc-Based Pave-ment Rating System, Richard C. Hanley and Donald A. Larsen, TE Mar./Apr. 92, p258-269.

Diamond Blades Easet the Road-Repair Grind, CE July

Digital Imaging Concepts and Applications in Pavement Management, Stephen G. Ritchie, TE May/June 90, p287-298.

Expert Systems: Ready to Hit the Road? James Denning, CE June 92, p71-74.

Instrumentation for a Full-scale Pavement Test in the Danish Road Testing Machine, Jørgen Krarup, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992).

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, Richard S. Haupt and Dale C. Bull, (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p125-137.

Integrated Pavement Management System for Kennedy International Airport, Gonzalo R. Rada, Charles W. Schwartz, Matthew W. Witczak and Scott D. Rabinow, TE Sept./Oct. 92, p666-685.

Pavement Response Measuring System, M. de Beer, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p78-95.

Pavement Subdrainage Instrumentation in Indiana: A Case Study, T. D. White and Zubair Ahmed, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992). p415-425

Predicting Vertical Acceleration in Vehicles Through Road Roughness, Jorge A. Marcondes, Mark B. Snyder and S. Paul Singh, TE Jan./Feb. 92, p33-49.

Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflectograph, Wim Th. Hoyinck and Joop van Zwieten, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p63-77.

Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

Testing Pavement Image Processing Systems: An Engineering Approach, Matthew O. Ward, Tahar El-Korchi, Norman Wittels and Michael A. Gennert, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), 14-65.

p41-62. USAF's New Contingency Soils/Pavement Testing Van, Mark S. Buncher and Don J. Christiansen, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p27-40.

p27-40.

Pavement damage
An Accelerated Pavement Testing System, Thomas D.
White, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.
Eaton, ed., 1992), p112-124.
An Airfield Pavement Forensic Analysis: Cairo East Air
Base, Randolph Charles Ahlrich and Gray Lee Anderton, (Materials: Performance and Preventino of Deficiencies and Failures, Thomas D. White, ed., 1992),
n30.52.

ton, (Malerials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p39-52. Effect of Tire Parameters on Pavement Damage and Load-Equivalency Factors, Peter E. Sebaaly and Nader Tabatabaee, TE Nov./Dec. 92, p805-819.

A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Addi-tives, W. Virgil Ping and Thomas W. Kennedy, (Mate-rials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p206-215. Limiting Design Parameters for Accelerated Pavement-Testing System, T. D. White, J. M. Albers and J. E. Haddock, Sr., TE Nov./Dec. 92, p787-804. Load and Temperature Measurements for a Study of Rut-ting Under High-Pressure Tires, William C. Dass, Su-san M. Dass and James G. Murfee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212. Overview of Permeable Bases, Robert H. Baumgardner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p275-287. Statistical Evaluation of Truck Overloads, Jamshid Mohammadi and Nadir Shah, TE Sept./Oct. 92, p651-665.

Pavement deflections
AASHTO Direct Structural Capacity Method Error Analysis, Ronald L. Baus and Andrew M. Johnson, TE Jan./Feb. 92, p20-32.
Consistency and Reproducibility of Falling Weight Deflections, Christ van Gurp, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p291-305.
Measurement of Airfield Pavement Response Under Moving Aircraft Loads, Dennis R. Hiltunen and Albert J. Bush, III., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p336-351.
Monitoring of Highway Pavements in Arizona Using Falling Weight Deflectometer, A. S. M. Mustaque Hossain and Larry A. Scofield, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p276-290.
Pavement Response Measuring System, M. de Beer, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p78-95.
Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflecters on March and Load Load Robert A. Eaton, ed., 1992), p78-95.

Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflectograph, Wim Th. Hoyinck and Joop van Zwieten, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p5-3-77.

A. Causin A. Pavement design
AASHTO Direct Structural Capacity Method Error Analysis, Ronald L. Baus and Andrew M. Johnson, TE
Jan./Feb. 92, p20-32.

Jan./Feb. Gav. Uncertainties in Pavement Response.

Jan/Feb. 92, p20-32.

Accounting for Uncertainties in Pavement Response, Milton E. Harr, (Road and Airport Pavement Response, Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p1-11.

Analysis and Design of Doweled Slab-on-Grade Pavement Systems, Anastasios M. Ioannides and George T. Korovesis, TE Nov/Dec. 92, p745-768.

DARWinim-ASHTO's New Pavement Design Program, David G. Peshkin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p301-308.

Design and Construction of a Bonded Fiber Concrete Overlay of CRCP (Louisiana, Interstate Route 10, August 1990), William M. King, Jr., William H. Temple and Steven L. Cumbaa, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p353-362.

Design Considerations for Multi-Wheel Aircraft, Walter R. Barker and Carlos R. Gonzalez, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p49-63.

Expert Systems: Ready to Hit the Road? James Denning.

Expert Systems: Ready to Hit the Road? James Denning, CE June 92, p71-74.

CE June 92, p71-74.
Field Instrumentation and Performance Monitoring of Rigid Pavements, Raymond S. Rollings and David W. Pittman, TE May/June 92, p361-370.
Integrated Pavement Management System for Kennedy International Airport, Gonzalo R. Rada, Charles W. Schwartz, Matthew W. Witczak and Scott D. Rabinow, TE Sept./Oct. 92, p666-685.
International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992, 0-87262-871-X, 284pp.
Laboratory versus Nondestructive Testing for Pavament.

284pp.
Laboratory versus Nondestructive Testing for Pavement Design, William N. Houston, Michael S. Mamlouk and Roban W. S. Perera, TE Mar/Apr. 92, p207-222.
Overview of Permeable Bases, Robert H. Baumgardner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p273-287.
Pavement Instrumentation for Verifying Elastic Theory, S. Nazarian, E. Y. Chai and D. R. Alexander, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p306-320.
Performance of Free Draining Base Course at Fort Camparator.

reformance of Free Draining Rase Course at Fort Campbell, Kentucky, William P. Grogan, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-448.

ressuremeter and MDD Moduli for Road Design, P. J.

rressuremeter and MDD Modulu for Road Design, P. J. Sanders, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p367-381.

Stochastic Model for Pavement Design, K. H. Chua, A. Der Kiureghian and C. L. Monismith, TE Nov/Dec. 92, p769-786.

Variations in Measured Resilient Modulus of Asphalt Mixes, Faisal H. Al-Sugair and Jamal A. Almudaiheem, MT Nov. 92, p343-352.

M1 Nov. 92, p343-332.

Pavement deterioration
Accounting for Uncertainties in Pavement Response,
Milton E. Harr, (Road and Airport Pavement Response
Monitoring Systems, Vincent C. Janoo, ed. and Robert
A. Eaton, ed., 1992), p1-11.
An Airfield Pavement Forensic Analysis: Cairo East Air
Base, Randolph Charles Ahlrich and Gary Lee Anderton, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),
n39-52. p39-52.

p39-22.
The Connecticut Photolog Laser Videodisc-Based Pavement Rating System, Richard C. Hanley and Donald A. Larsen, TE Mar./Apr. 92, p258-269.
The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79.
Digital Imaging Concepts and Applications in Pavement Digital Imaging Concepts and Applications in Pavement Management, Stephen G. Ritchie, TE May/June 90, p287-298.

p.651-298. Limiting Design Parameters for Accelerated Pavement-Testing System, T. D. White, J. M. Albers and J. E. Haddock, Sr., T. Flovy-/Dec. 92, p.787-804. Stochastic Model for Pavement Design, K. H. Chua, A. Der Kiureghian and C. L. Monismith, TE Nov./Dec. 92, p.769-786.

72, p.109-180.

Testing Pavement Image Processing Systems: An Engineering Approach, Matthew O. Ward, Tahar El-Korchi, Norman Wittels and Michael A. Gennert, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p.41-62.

De l'Order Road Rehabilitation, Anchorage, Alaska, T. S. Vinson, J. W. Rooney, H. Zhou and N. Coetzee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p397-414.

Unified Pavement Distress Index for Managing Flexible Pavements, C. H. Juang and S. N. Amirkhanian, TE Sept./Oct. 92, p686-699.

Pavement Joints
Dynamic Analysis of Rigid Airport Pavements with Discontinuities, Anant R. Kukreti, Mohammad R. Taheri
and Ragnar H. Ledesma, TE May/June 92, p341-360.
Field Instrumentation and Performance Monitoring of
Rigid Pavements, Raymond S. Rollings and David W.
Pittman, TE May/June 92, p361-370.

Favenesic Analysis of a Two-Component Joint Scalant

Pittman, TE May/June 92, p361-370.
Forensic Analysis of a Two-Component Joint Sealant
Using FTIR-ATR, Laurand H. Lewandowski, Larry N.
Lynch and Rogers Graham, (Materials: Performance
and Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p53-65.
Forensic Analysis Techniques for Joint Sealants, Rogers
T. Graham and Larry N. Lynch, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p404-414.

Pavement management systems Caltrans is on the Road Again, CE June 92, p11.

Computerized Management Systems for Pavement Networks, Kathryn A. Cation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p293-300.

The Connecticut Photolog Laser Videodisc-Based Pave-ment Rating System, Richard C. Hanley and Donald A. Larsen, TE Mar/Apr. 92, p.258-269. Expert Systems: Ready to Hit the Road? James Denning, CE June 92, p71-74.

CE June 92, p71-74.

Integrated Pavement Management System for Kennedy International Airport, Gonzalo R. Rada, Charles W. Schwartz, Matthew W. Witczak and Scott D. Rabinow, TE Sept./Oct. 92, p666-685.

PMSC: Pavement Management System for Small Communities, Amir Tavakoli, Mitchell S. Lapin and J. Ludwig Figueroa, TE Mar/Apr. 92, p270-280.

Testing Pavement Image Processing Systems: An Engineering Approach, Matthew O. Ward, Tahar El-Korchi, Norman Wittels and Michael A. Gennert, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p41-62.

Unified Pavement Distress Index for Managing Elevity.

Unified Pavement Distress Index for Managing Flexible Pavements, C. H. Juang and S. N. Amirkhanian, TE Sept./Oct. 92, p686-699.

Sept. Oct. 92, po86-699.

Pavement overlays

Design and Construction of a Bonded Fiber Concrete
Overlay of CRCP (Louisiana, Interstate Route 10, August 1990), William M. King, Jr., William H. Temple
and Steven L. Cumbaa, (Materials: Performance and
Prevention of Deficiencies and Failures; Thomas D.
White, ed., 1992), p353-362.

Beuropean Road Comes to the U.S. John Prendergast,
CE May 92, p35-54.

Government-Industry Cooperation: Fast-Track Concrete
Innovation, C. H. Nam and C. B. Tatum, CO Sept. 92,
p454-471.

p43-4-471.
Overlays on Deck, Paul Tarricone, CE Sept. 92, p42-45.
Performance of Recycled Asphalt Concrete Materials in an Arid Climate, Mustaque Hossain and Larry A. Scofield, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),

p413-421.

Remaining-Life Consideration in Pavement Overlay Design, Tien F. Fwa, TE Nov./Dec. 91, p585-601.

Terminal Asphalt Patching: An Innovative Approach, C. Davis Rudolf, III. and George Degaraff, (Ports '92, David Torseth, ed., 1992), p836-848.

Thin "Whitetop' Pavement Lives 30 Years in One, CE

udor Road Rehabilitation, Anchorage, Alaska, T. S. Vinson, J. W. Rooney, H. Zhou and N. Coetzee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p397-414. Tudor Roa

Pavement recycling
Highway Construction Use of Wastes and By-Products,
Robert J. Collins and Stanley K. Ciesielski, (Utilization
of Waste Materials in Civil Engineering Construction,
Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed.,
1992), p140-152.

performance of Recycled Asphalt Concrete Materials in an Arid Climate, Mustaque Hossain and Larry A. Sco-field, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p415-427.

Technology Issues for Enhancing Waste Material Utiliza-tion in Highway Construction Addressed by the SHRP-IDEA Program, K. Thirumalai, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), pl.-8.

Pavements
AASHTO Direct Structural Capacity Method Error Analysis, Ronald L. Baus and Andrew M. Johnson, TE Jan./Feb. 92, p20-32.

An Accelerated Pavement Testing System, Thomas D. White, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p112-124.

Accounting for Uncertainties in Pavement Response, Milton E. Harr, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p1-11.

A. Eaton, ed., 1992), p1-11.

Alternative Airfield Pavement Quality Control, Raymond P. Rawe and Terry A. Ruhl, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p109-123.

The Application of Dynamic Modeling in the Nondestructive Testing of Roads and Airfields, Mark Anderson, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p321-335.

Design Considerations for Multi-Wheel Aircraft, Walter R. Barker and Carlos R. Gonzalez, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p49-63.

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p. 261-278.

Durability Failure of a Concrete Block Port Pavement, Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl-15.

Dynamic Stiffness Analysis of Concrete Pavement Slabs, N. McCavitt, M. R. Yates and M. C. Forde, TE July/Aug, 92, p540-565.

Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, GT May 90, p774-789. A European Road Comes to the U.S. John Prendergast, CE May 92, p52-54.

CE May 92, p52-54.

Europeans Get What They Pay For, CE Sept. 92, p11.

Experiments with Wind Effects on Pavement Runoff, Joseph R. Reed, David F. Kibler and George Krallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.

Expert Systems: Ready to Hit the Road? James Denning, CE June 92, p71-74.

Eight Evaluation of Strain Gauser in Asshall Concrete.

Field Evaluation of Strain Gauges in Asphalt Concrete Pavements, Peter E. Sebaaly and Nader Tabatabaee, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p382-396.

Histogram-Based Approach for Automated Pavement-Crack Sensing, K. R. Kirschke and S. A. Velinsky, TE Sept./Oct. 92, p700-710.

Impact of Variability in Pavement Parameters on Backcalculated Moduli, Jessica Rodriguez-Gomez, Carlos Ferregut and Sobeli Nazarian, (Road and Air-port Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, p261-

Improved Resilient Modulus Realized with Waste Product Mixtures, Seung W. Lee and K. L. Fishman, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1356-1367.

Installation and Monitoring of Thermal Conductivity Suction Sensors in a Fine-Grained Subgrade Soil Sub-jected to Seasonal Frost, Walaa E. I. Khogali, Kenneth O. Anderson, Julian K. Gan and Delwyn G. Fredlund, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p153-167.

Instrumentation for a Full-scale Pavement Test in the Danish Road Testing Machine, Jørgen Krarup, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p96-111.

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, Richard S. Haupt and Dale C. Bull, (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p125-137.

Investigation of a Concrete Biistering Failure, R. S. Rol-lings and G. S. Wong, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30.

Limiting Design Parameters for Accelerated Pavement-Testing System, T. D. White, J. M. Albers and J. E. Haddock, Sr., TE Nov./Dec. 92, p787-804.

oad and Temperature Measurements for a Study of Rut-ting Under High-Pressure Tires, William C. Dass, Su-san M. Dass and James G. Murfee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212.

Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212.
Measurement of Airfield Pavement Response Under Moving Aircraft Loads, Dennis R. Hiltunen and Albert J. Bush, Ill., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p336-351.
Monitoring of Highway Pavements in Arizona Using Falling Weight Deflectometer, A. S. M. Mustaque Hosain and Larry A. Scofleld, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p276-290.
A More Rational Approach to Pavements. Milton E.

A More Rational Approach to Pavements, Milton E. Harr, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),

A New NDT Device for Comprehensive Pavement Main-tenance (Theoretical Aspects), S. Nazarian and M. Baker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p948-951.

Non-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1121-1128.

Pavement Improvement with Asphaltic Membranes, Ilan Ishai, Nathan Livnat and Moshe Livneh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1922). p1067-1079.

Pavement Instrumentation for Verifying Elastic Theory, S. Nazarian, E. Y. Chai and D. R. Alexander, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p306-320.

Pavement Subdrainage Instrumentation in Indiana: A Case Study, T. D. White and Zubair Ahmed, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

p415-425

Pavement Surface Maintenance: Overview of SHRP H-106 Experimental Installations, Russell Romine, David Peshkin, Kelly Smith and Tom Wilson, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p146-159.

Performance of Free Draining Base Course at Fort Campbell, Kentucky, William P. Grogan, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-448.

Predicting Vertical Acceleration in Vehicles Through Road Roughness, Jorge A. Marcondes, Mark B. Snyder and S. Paul Singh, TE Jan./Feb. 92, p33-49.

Pressuremeter and MDD Moduli for Road Design, P. J. Sanders, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p367-381.

Properties of Tire Chips for Lightweight Fill, Dana N. Humphrey and William P. Manion, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1344

Quantification of Agency and User Values of Pavement Performance, T. F. Fwa and K. C. Sinha, TE Jan/Feb. 92, p84-98.

Remaining-Life Consideration in Pavement Overlay Design, Tien F. Fwa, TE Nov./Dec. 91, p585-601.

Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

Roughness Measurements of Airfield Pavements, Elson B. Spangler, Anthony G. Gerardi and Hisao Tomita, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366.
Seasonal Monitoring of Pavements—A Whole Lot More, Cheryl Allen Richter, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p182-195.
The SHRP-LTPP Apnhalt Resilient Modulus Pilled Study.

The SHRP-LTPP Asphalt Resilient Modulus Pilot Study, William O. Hadley and Jonathan L. Groeger, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl 30-145.

Splice/Development Length Requirements for FRP Grids
Used in the Structural Reinforcement of Concrete,
Edwin R. Schmeckpeper and Charles H. Goodspeed,
(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), p632-644.

and Failures, Thomas D. White, ed., 1992), p632-644. Standard Methodologies for the Forensic Investigation of Pavements, James O'Kon, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p31-38. Strain and Stress Measurements in Pavements, Matti Huhtala and Jari Pihlajamiki, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p229-243. Studies Related to Aircraft/Rumwar. Friction, Performance of the Parker of Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, p229-243.

Studies Related to Aircraft/Runway Friction Performance, Thomas J. Yager, (International Air Transportation: A New International Airport, Robert E. Boyer, ed.,

1992), p64-71.

Thaw Weakening Research at the Minnesota Road Re-search Project, Michel J. Hovan and David E. New-comb, (Road and Airport Pavement Response Monitor-ing Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p138-152.

Tudor Road Rehabilitation, Anchorage, Alaska, T. S. Vinson, J. W. Rooney, H. Zhou and N. Coetzee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992).

Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p397-414. Contingency Soils/Pavement Testing Val-Mark S. Buncher and Don J. Christiansen, (Road and Airport Pavement Response Monitoring Systems, Vin-cent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p27-40.

Utilization of Waste Materials in Civil Engineering Con-struction, Hilary I. Inyang, ed. and Kenneth L. Berge-son, ed., 1992, 0-87262-907-4, 358pp.

The World's Smallest Road, CE Nov. 92, p10.

Predicting Effluent PCBs From Superfund Site Dredged Material, Edward L. Thackston and Michael R. Paler-mo, EE Sept./Oct. 92, p657-665.

Stabilization and Fixation Using Soil Mixing, Brian H. Jasperse and Christopher R. Ryan, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1273-

# Peak flow

Calculation of Runoff from Rainfall Using "NURP" Data, Albert H. Halff, Henry M. Halff and Juan S. Ro-driguez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p487-492.

1992), p487-492.

A Chance Constrained Optimization Model Using Kinematic Wave Routing for Stormwater Infrastructure Rehabilitation. Timothy L. Jacobs and Miguel A. Medina, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p748-753.

Distribution of Wetland Hydrologic Parameters, Misganaw Demissie and Abdul Khan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p470-475.

Evaluating the Hydrologic Functions of Wetlands, Abiola

Evaluating the Hydrologic Functions of Wetlands, Abiola A. Akanbi and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487.

Regional Planning for Stormwater Management, Thomas S. George and John P. Hartigan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 4492-497.

Sizing Stormwater Detention Reservoirs to Reduce Peak Flows, Bruce M. McEnroe, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p719-724.

1992), p719-724.
Station Selection for Pooling Flood Data in a Densely Gauged Region of the UK, Duncan W. Reed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p25-30.
Trends in Streamflow Due to Wetland Drainage, Abdul Khan and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p476-481.

ed., 1992), p476-481.

Peak hour traffic
Analyzing Fast-Food Drive-Up Window Site Impacts, J.
L. Gattis, N. Zaman, G. W. Tauxe and R. S. Marshment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20.

Comparison of Delay and ICU Analyses—Case Study, Cathy Higley and Venu Sarakki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p21-25.

eak runoff Estimating Peak Flows from Small Agricultural Water-sheds, James V. Bonta and A. Ramachandra Rao, IR Jan./Feb. 92, p122-137.

Streamflow Forecasting Using Trainable Neural Net-works, Jason Smith and Robert N. Eli, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad source-In Search of S. Karamouz, ed., 1992), p56-61.

Aaramouz, ed., 1992), p56-61. Study of Groins on the Middle Rio Grande, Drew C. Baird and Cassie C. Klumpp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p822-827.

Arc-Length Method for Passing Limit Points in Structural Calculation, W. F. Lam and C. T. Morley, ST Jan. 92, p169-185.

C<sub>0</sub>/C<sub>c</sub> Concept Applied to Compression of Peat, Patrick J. Fox, Tuncer B. Edil and Li-Tus Lan, GT Aug. 92, p1256-1263.

pl256-1263.

Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hultgren, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. 
Boulanger, ed., 1992), p775-787.

Threatened Levees on Sherman Island, Roger Foott, 
Richard Sisson and Roy Bell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, 
ed. and Ross W. Boulanger, ed., 1992), p756-774.

Pedestrian traffic flow

Vibration of Pedestrian Overpass, Tso-Chien Pan, CF Feb. 92, p34-45.

Vibration of Pedestrian Overpass, Tso-Chien Pan, CF Feb. 92, p34-45.

Peer review

Proposal for Structural Design Peer Review, Rubin M. Zallen, CF Nov. 90, p208-215.

Routes to Chaos of a Vertically Rotating Pendulum, S. Yip and F. DiMaggio, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p672-675.

Penetration

Analysis of Membrane Penetration in Triaxial Test, Steven L. Kramer, N. Sivaneswaran and R. O. Davis, EM Apr. 90, p773-789.

Penetration resistance Hypervelocity Impact Penetration Phenomena in Alumi-num Space Structures, William P. Schonberg, AS July 90, p173-185.

Postdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115.

Penetration tests

Bearing Capacity of Auger-cast Piles in Sand, William J. Neely, GT Feb. 91, p331-345.

Geotechnical Investigation Strategies for Lunar Base, Dan A. Brown and Glenn Rix, AS Apr. 92, p199-213.

Dan A Blown and Orein and Article 1983 Borah Peak Earthquake, Leslie F. Harder, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p956-

972.
Simulated Field Trials of Non-Destructive Concrete Test Methods for Highway Structures, John A. Bickley and Paul Read, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p162-170.

Pennoni, Chuck

ASCE President Prizes Professionalism in Pursuit of En-gineering Goals, CE Feb. 92, p70.

Pennsylvania
The Evolution of an Environmental Monitor, Peter J.
Dodds and R. Scott Sternberger, CE June 92, p56-58.

'eople movers l'eople Mover Helps Tame O'Hare Tangles, CE Dec. 92,

People Mover Helps Tame O'Hare Tangies, C.E. Dec. 92, p10.

Soft Touch People Mover Central Control, R. D. Milnes, R. S. Fahringer and J. B. Bojarski, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p199-206.

Percotation Artificial Recharge Feasibility Evaluation by Field Investigation, Maury E. Ford, Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Scott Keys, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647.

Perforating

Hydraulic Design of Perforated Breakwaters, M. Fugazza and L. Natale, WW Jan./Feb. 92, p1-14.

Performance
An Analysis of Human Performance in Simulated Partial-Gravity Environments, Nathan R. Moore and
David J. Guterrez, (Engineering, Construction, and
Operations in Space III, Willy 2, Sadch, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p2282-2292.

Computerized Management Systems for Pavement Networks, Kathryn A. Cation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p293-300.

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

Demands Placed on Waste Package Performance Testing and Modeling by Some General Results of Reliability Analysis, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p994-1002.

Effectiveness of Injected Cement Grout under Harsh Environmental Conditions, G. Ballivy, J. C. Colin and T. Mnif, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p588-600.

The Effects of Fillers and Admixtures on Grout Performance, Sandra Z. Tosca and Jeffrey C. Evans, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p337-349.

Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, M. Peehs and K. Einfeld, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 181-1187

A Facility Programming Product Model, Gregory M. Per-kinson, Francois Grobler and Victor E. Sanvido, (Com-puting in Civil Engineering and Geographic Informa-tion System Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p41-48.

Ground Anchorage Technology—A Forward Look, Stuart Littlejohn, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p39-62.

An Information System Architecture for Construction Materials, Sami Dib and François Grobler, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p332-339.

Wright, ed., 1992), p332-339.
Mechanical Properties of High Performance Concretes, Shuaib H. Ahmad, Paul Zia, Mike Leming and M. R. Hansen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p864-867.

A New Technique for Quality Control of Dynamic Compaction, Chaim J. Poran, King-Sen Heh and Jorge A. Rodriguez, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p915-926.

Cutpost Service and Construction Robot (CSCR), Streen.

Ilan Juran, ed., 1992), p915-926.
Outpost Service and Construction Robot (OSCR), Steven Kent, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p145-1463.
Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwilo and Rudy S. Chow, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p12-17.
Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p77-90.

Feb. 92, p17-90.

A Regulatory Perspective on Design and Performance Requirements for Engineered Systems in High-Level Waste, Robert M. Bernero, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p813-821.

Structural Studies of Two Aerobrake Heatshield Panel Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932.

Studies Related to Aircraft/Runway Friction Perform-

Studies Related to Aircraft/Runway Friction Performance, Thomas J. Yager, (International Air Transportation: A New International Airport, Robert E. Boyer, ed.,

tion: A New International Airport, Robert E. Boyer, ed., 1992), p64-71.
TBM Performance Prediction in Yucca Mountain Welded Tuff From Linear Cutter Tests, Richard Gertsch, Levent Oxdemir and Leslie Gertsch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1516-1520.

p1310-1320. Testing an Expert System for the Activated Sludge Process, Wenje Lai and P. M. Berthouex, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p124-146. U.S. Experience With Armor-Stone Quality and Performance, Richard J. Lutton, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p40-59.

use of Interactive Simulation Environments for Evalua-tion of Water Supply Reliability, Larry M. Karpack and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—Planning Search of Sobutions, Mohammad Karamouz, ed., 1992), p144-149.

The Wide-Angle Optoelectronic Stereo Scanner WAOSS for the Soviet Mars 94/96 Missions, Rainer Sandau and Dieter Oertel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2241-2251.

Performance evaluation

Analysis of ARS Low-Drop Grade-Control Structure,
Steven R. Abt, Mark R. Peterson, Chester C. Watson
and Scott A. Hogan, Hy Oct. 92, pl 1424-1434.

Analysis of Performance of Pile Groups Adjacent to Deep
Excavation, Richard J. Finno, Samir A. Lawrence, Nabil F. Allawh and Indra S. Harahap, GT June 91,
p934-955.

Application of a Probabilistic System-Model Based Methodology for the Performance Assessment of Deep Underground Disposal of Nuclear Wastes, T. J. Sumerling and B. G. J. Thompson, (High Level Radioactive Waste Management Program Committee, 1992), p1647-1657.

Application of Performance Assessment as a Tool for Guiding Project Work, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2126-2135.

Application of Results from the Poços de Caldas Project in the Kristallin-I HLW Performance Assessment, I. G. McKinley, W. R. Alexander, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p357-361.

Applications of Performance Assessment in Support of the Exploratory Studies Facility (ESF) Design, M. E. Fewell, S. R. Sobolik, J. H. Gauthier, L. E. Shephard and L. S. Costin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670.

A Bayesian Reliability Approach to the Performance Assessment of a Geological Waste Repository, John A. Flueck and Ashok K. Singh, (High Level Radioactive Waste Management Program Committee, 1992), p1625-1632. Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p272-290.

398

p272-290.
Composites Performance in the Infrastructure, Richard E. Chambers, (Materials: Performance and Prevention of Defliciencies and Failures, Thomas D. White, ed., 1992), p532-545.
Current Perspectives on Performance Assessment at the NRC, S. M. Coplan, N. A. Eisenberg, M. V. Federline and John D. Randall, (High Level Radioactive Waste Management Program Committee, 1992), p2145-2150.
Design and Performance of Bath County Upper Dam and Reservoir Slopes, K. L. Wong, D. E. Kleiner, A. M. Wood, M. C. Geary and R. G. Oechsel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p371-386. 386

386.

Design Considerations for Multi-Wheel Aircraft, Walter R. Barker and Carlos R. Gonzalez, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p49-63.

Developing a Functioning Visualization and Analysis System for Performance Assessment, M. L. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p846-851.

Developing Conceptual Models for Performance Assessment of Waste Management Sites, Felicia A. Kerl, A. Sharif Heger and David P. Gallegos, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p502-509. p502-509.

p502-509. Electronic Theodolites: Comparison Test, Abdalla Elsadig Ali, SU Feb. 91, p3-8. Engineered Barrier System Failure Modeling: A Statistical Approach, Daniel B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p401-408.

p401-408. Evaluation of Flowable Fly-Ash Backfill. I: Static Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463. Evaluation of Performance of Two Piles Using Pressuremeter Method, Roger Frank, Nicholas Kalteziotis, Michel Bustamante, Stavros Christoulas and Haralambos Zervogiannis, GT May 91, p695-713. Field Instrumentation and Performance Monitoring of Rigid Pavements, Raymond S. Rollings and David W. Pittman, TE May/June 92, p361-370. Full Scale Application of Active Bracing Systems, M. A.

Rigio Pavements, Raymond S. Rollings and David W. Pittman, TE May/June 92, p361-370.

Full Scale Application of Active Bracing Systems, M. A. Riley, A. M. Reinhorn and T. T. Soong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p816-819.

Implementation of Material Requirements in Specifications, Harvey C. Beckham and John R. Smith, (Materidis: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p428-433.

Integrated Performance Assessment Model for Waste Package Behavior and Radionuclide Release, Richard Kossik, lan Miller and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Tommar Committee, 1992), p1786-1793.

A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Additives, W. Virgil Ping and Thomas W. Kennedy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p206-215.

Lessons Learned from Compacted Clay Liner, Bill R. Elbury, David E. Daniel, Gregory A. Sraders and David C. Anderson, GT Nov. 90, p1641-1660.

Lessons Learned from the Performance Assessment of SKI Project-90, J. Andersson, K. Andersson, S. Norrby and S. Wingefors, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2109-2113.

Long Term Behavior of Urban Fill Embankments, J. David Rogers, (Siability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1238-1273.

Masonry Wall and Window System Leakage Investigation for University Building, John Frauenhoffer, CF May 92, p107-115.

Model Sensitivity Analysis in Near-Field Performance Assessment, N. C. Garisto and D. M. LeNeveu, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2284-2289.

Natural Analogues: The State of Play in 1992, Neil A. Chapman, (High Level Radioactive Waste Management Program Committee, 1992), p1695-1700.

Observation of the Post-Construction Performance of a System of Groins along an Eroding Beach, C. I. Moutzouris, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-319.

On the Role of Experimental Mechanics in Assessing the Performance of Concrete, Stuart E. Swartz, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p19-122.

Overview of the Radioactive Waste Management Program Committee, 1992), p52-36. 1992), p52-56.

139.21, p.52-36.
Performance Assessment for a High-Level Waste Repository at Yucca Mountain, R. Shaw, R. F. Williams, J. C. Slepp and R. McCuire, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.869-873.
Performance Evaluation of Lake Shelbyville by Stochastic Dynamic Programming, Han-Lin Lee, Jon C. Liebman and E. Downey Brill, Jr., WR Mar./Apr. 92, p.185-204.
Evaluations V. M. Benele, D. Stephenson, 1997-1998.

p183-204.
Performance Evaluations: Key to People Development, Everett S. Thompson, ME Oct. 90, p373-377.
Performance of Epoxy-Coated Steel in Continuously Reinforced Concrete Pavement, Farrel J. Zwerneman, Rex C. Donahey, Hameed S. Syed and Srinivas R. Gunna, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 2323-235. p339-352.

p339-332.

Performance of Free Draining Base Course at Fort Campbell, Kentucky, William P. Grogan, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-448.

Performance of Orthotropic Bridge Decks, Ali Touran and Alex Okereke, CF May 91, p134-148.

and Alex Okereke, C.F. May 91, p134-148.
Performance of Recycled Asphalt Concrete Materials in an Arid Climate, Mustaque Hossain and Larry A. Scofield, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p415-427.

p415-427.
Performance of Test Embankment Constructed to Failure on Soft Marine Clay, B. Indraratna, A. S. Balasubramaniam and S. Balachandran, GT Jan, 92, p12-33.
Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hultgren, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p775-787.
Performance-Assessment Comparisons for a Repository

Boulanger, ed., 1992), p77-87.
Performance-Assessment Comparisons for a Repository
Containing LWR Spent Fuel or Partitioned/
Transmuted Nuclear Waste, R. W. Barmard and W.
W-L. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1397-1403.

Performance-Based Evaluation of Lunar Base Construc-tion Equipment and Methods, Walter W. Boles, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p332-340.

Planning Operations of Bulk Loading Terminals by Sim lation, Lal C. Wadhwa, WW May/June 92, p300-315.

Quantification of Agency and User Values of Pavement Performance, T. F. Fwa and K. C. Sinha, TE Jan./Feb. 92, p84-98.

92, pa-98.

RCC Dam Design Concepts Versus Construction Conditions for Stagecoach Dam, Terrence E. Arnold and Daniel L. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p291-307.

Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1429-1436.

The Role of Performance Assessment in Validation, Reg-ulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

mittee, 1992), p99-101.

Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, 0-87262-862-0, 520pp.

520pp.

The SHRP-LTPP Asphalt Resilient Modulus Pilot Study, William O. Hadley and Jonathan L. Groeger, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p 130-145.

Slope Stabilization Using In-Situ Earth Reinforcements, Seth L. Pearlman, Bradley D. Campbell and James L. Withiam, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p 1323-1348.

Spent Fuel Characteristics Potentially Relevant to Repository Design Assessment, Michael G. Bale and Thomas A. Thornton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Togram Committee, 1992), p 116-121.

Summary Conclusions & Recommendations of the 1991

gram Committee, 1992, p116-121.
Summary Conclusions & Recommendations of the 1991
Washington State Ports and Transportation Systems,
Paul Chilcote and Paul Sorensen, (Ports '92, David
Torseth, ed., 1992), p1-14.
Use of Wingz Spreadsheet as an Interface to Total-System
Performance Assessment, W. F. Chambers and A. H.
Treadway, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493.
Validation Laure Assessment of the Performance Assessment

gram Committee, 1992), p489-493.
Validation Issues Associated with Performance Assessment Modeling Activities for High-Level Radioactive Waste Repositories, Thomas J. Nicholson, Charles F. Voss and Johan Andersson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1437-1441.
Yucca Mountain Project Total-System Performance Assessment Preliminary Analyses: Overview, R. W. Barnard and H. A. Dockery, (High Level Radioactive Waste Management Program Committee, 1992), p874-881.

Performance standards
Performance Specifications for the Design and Manufacture of Energy Efficient Housing in the 21st Century, Ronald Kellett, Mark DeKay, Brook Muller, Donald Peting and G. Z. Brown, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p101-

Frequency Response of Disordered Periodic Structures, G. Q. Cai and Y. K. Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p796-799.

Kinematics of Nonlinear Random Waves near Free Sur-face, Sau-Lon James Hu and Dongsheng Zhao, EM Oct. 92, p2072-2086.

Wave Propagation in Fluid Loaded Periodic Structures, Michael L. Accorsi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p212-215.

Design of Piles in Permafrost Under Combined Lateral and Axial Load, A. Foriero and B. Ladanyi, CR Sept. 91, p89-105.

Finite Element Simulation of Behavior of Laterally Load-ed Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Permeability
Anisotropic Behavior of Cemeat-Grouted Sand, Raymond J. Krizek and Maan Helal, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p541-655

Concrete for Sealing Voids in Rubble Structures, D. P. Simpson, B. D. Neeley and D. M. Walley, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p847-861.

Contaminant-Grout Interaction, Stephan A. Jefferis, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1393-1402.

1992), p1393-1402. Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, Siew-Ann Tan, Kee-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p209-228. Effects of Freezing on Hydraulic Conductivity of Compacted Clay, Woon-Hyung Kim and David E. Daniel, GT July 92, p1083-1097. Effects of Porous Bed on Turbulent Stream Flow above Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92, p1272-1276.

p1222-1240.

valuation of Collection-Well Parameters for DNAPL, K. Schmidtke, E. McBean and F. Rovers, EE Mar./Apr. 92, p183-195.

92, p183-193. Fundamental Observations on Cement Based Grouts (1): Traditional Materials, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p474-485. Fundamental Observations on Cement Based Grouts (2): Microfine Cements and The Cemill® Process, B. De

Paoli, B. Bosco, R. Granata and D. A. Bruce, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p486-499

ydraulic Conductivity of Noncohesive Soils, B. Aberg, GT Sept. 92, p1335-1347.

G1 Sept. 74, p133-1341.

Hydrogeotechnical Considerations for the Disposal of Oil

Shale Solid Waste Material, Victor R. Hasfurther and
John P. Turner, (Irrigation and Drainage: Saving a

Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p395-400.

man, ed., 1992), p395-400.
Interaction of Inorganic Leachate with Compacted Pozzolanic Fly Ash, Tuncer B. Edil, Linda K. Sandstrom and P. M. Berthouex, GT Sept. 92, p1410-1430.
Lessons Learned from Compacted Clay Liner, Bill R. Elsbury, David E. Daniel, Gregory A. Sraders and David C. Anderson, GT Nov. 90, p1641-1660.
Overview of Permeable Bases, Robert H. Baumgardner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p275-287.
Permanence of Grouted Sands Exposed to Various Water Chemistries, John M. Siwula and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy Lings, 1992), p1403-1419.
Permeability of Roller Compacted Concrete, Nemkumar

Permeability of Roller Compacted Concrete, Nemkumar Banthia, Michel Pigeon, Jaques Marchand and Jean Boisvert, MT Feb. 92, p27-40.

Boisvert, MT Feb. 92, p27-40.

Permeation of Organic Chemicals Through HDPE Geomembranes, Joni P. Sakti, Jae K. Park and John A. Hoopes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p201-207.

Preferred Orientation of Pore Structure in Cement-Grouted Sand, Maan Helal and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p526-540.

Reliability Model for Soil Liner. Post Construction J. Bo-Reliability Model for Soil Liner.

Reliability Model for Soil Liner: Post Construction, I. Bo-gardi, W. E. Kelly and A. Bardossy, GT Oct. 90, p1502-1520.

Stabilizing Compacted Clay Against Chemical Attack, Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567.

Theory and Experiments on Subsurface Contaminant Sorption Systems, Kirk Hatfield, David Burris, Thom-as B. Stauffer and Joe Ziegler, EE May/June 92, p322-

Trends in Phreatic Surface Motion in Rubble-Mound Breakwaters, Kevin R. Hall, WW Mar/Apr. 91, p179-

Unsteady Drawdown of Water Table, M. Emin Savci, IR July/Aug. 90, p508-526.

Use of Hierarchical Lattices for Predicting the Fluid or Stress Transfer in Concrete, D. Breysse, D. Fokwa and G. Schlatter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p171-174.

Water Content-Density Criteria for Compacted Soil Liners, David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830.

eability tests High Strength, Low Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p363-372.

Assessment of Impacts Associated with Alternate Cooling System Designs for an Electric Power Station, Steven H. Wolf, James D. Bowen, Donald P. Galya and Frank S. Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231.

Linaweaver, ed., 1992), p226-231.

Beach Nourishment with Aragonite and Tuned Structures, Kevin R. Bodge, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p73-89.

Case History: TRE At a Refinery/Chemical Plant, Carol L. La Breche and Russell S. Dykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p555-560.

Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (Ports '92, David Torseth, ed. 1992), 275-287.

ed., 1992), p275-287

Evolving Mitigation Requirements for Port Develop-ment, William K. Fehring, Mark Easley and David C. Carpenter, (Ports '92, David Torseth, ed., 1992), p203-

213.
Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area, Jill C. Bicknell and Sachiko Itagaki, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p451-456.
Jefferson Parish Storm Water Management, Marnie Winter and Kent Dussom, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p457-461.

Leave the Short Form at Home, CE Apr. 92, p10.

Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, Kenneth P. Baskin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p691-694.

Model for Prescribing Ground-Water Use Permits, James W. Male and Frederick A. Mueller, WR Sept./Oct. 92,

p543-561.

p543-561. North Central Texas Municipalities Address the NPDES Stormwater Regulations Through Regional Coordination, George E. Oswald, Alan H. Plummer and Robert W. Brashear, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p62-63. NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, Paul Makowski and John G. Garland, III., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p797-802.

Pollution Control Under the NPDES Stormwater Program, Thomas S. George and June Barrett-McDaniels, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645.

State Permit Program and Toxics Individual Control Strategies: A Case Study, Altaf A. Memon, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p561-566.

Statewide NPS Management Strategies, William Whip-ple, Jr., Vincent H. Berg and Eric H. Livingston, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992, p.843–848.

The Status of Yucca Mountain Site Characterization Activities, Carl P. Gertz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p748-750.

System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Ralph A. Wurbs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p498-503.

Thermal Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604.

Water Reduction as Justification for Permit Backsliding, Gary W. Siegel and Margaret L. Dwyer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156.

Personnel

A New Chief for the Corps, CE Sept. 92, p.11.

Shielding and Criticality at the MRS Facility, Kenneth L. Ashe, Robert G. Eble and James R. Hilley, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1902): 2056-2061. 1992), p2056-2061.
Technical Personnel Shortages in Construction Industry, Russel C. Jones, El Jan. 90, p16-26.

Personnel development
Competition Leads to Losing, Frank Pierce Johnson, ME
July 90, p258-261.
Conflict Management Training for Today's Engineering
Managers, Vicki S. Kaman and James A. McCambridge, ME July 92, p298-305.
Issues in Human Resources: Managing Talent in the 21st
Century, Linda Allen and Joseph Sewards, ME Oct. 92,
p340-345.

p.340-342.
p.340-342.
Performance Evaluations: Key to People Development, Everett S. Thompson, ME Oct. 90, p.573-377.
Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl.298-1302.

Persoanel management
Four Propositions for Quality Management of Design Organizations, Donald H. Kline and Gregory B. Coleman,
ME Jan. 92, pp. 15-26.
ME Jan. 92, pp. 826000008; Managing Talent in the 21st

Issues in Human Resources: Managing Talent in the 21st Century, Linda Allen and Joseph Sewards, ME Oct. 92, p340-345.

p340-343. Managing and Motivating People on a Joint Venture Pro-ject, J. Daniel Carrier, ME Oct. 92, p362-366. Performance Evaluations: Key to People Development, Everett S. Thompson, ME Oct. 90, p373-377.

Perturbation
Cylindrical Shell Redesign by Large Admissible Perturbations, Basern Alzahabi and Michael M. Bernitsas, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p200-203.
Nonlinear Free Vibration of Laminated Composite
Plates, Alavandi Bhimaraddi, EM Jan. 92, p174-189.
Nonlinear System under Non-Gaussian Impulsive Noise
Excitation, G. Q. Cai and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p18-151.
Stochastic Mixed Finite Difference Method, P. D. Spanos
and B. A. Zeldin, (Engineering Mechanics, Loren D.

and B. A. Zeldin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p804-

Unsteady Drawdown of Water Table, M. Emin Savci, IR July/Aug. 90, p508-526.

July/Aug. 90, p508-526.

Pesticides

Aldicarb Transport in the Coastal Plain of N. C. C. L. Munster, R. W. Skaggs, J. E. Parsons, R. O. Evans, J. W. Gilliam and E. W. Harmsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424.

The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, Pankaj A. Arora and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pietce Linawaever, ed., 1992), p451-456.

The Greening of Greens, R. Todd Borden, CE Oct. 92,

The Greening of Greens, R. Todd Borden, CE Oct. 92, p55-57.

p35-37. Linking GIS with Hydrologic Modeling, Barry Evans, Jeffrey Grimm, Larry Thornton and Paul Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p499-504.

A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2.4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, P. Ho and W. F. McTenan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992.) p.364-369.
Water Quality Implications of Encapsulated Atrazine, Adel Shirmohammadi, Timothy J. Gish and Raviraj Vyravipillai, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p425-430.

Petrographic analysis
Physical Processes and Effects of Magmatism in the
Yucca Mountain Region, Greg A. Valentine, Bruce M.
Crowe and Frank V. Perry, [High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p2014-2024.

Pretroleum
Feasibility Study of Petroleum Development in the Ross Sea, Antarctica, Dieter Beike, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), p341-355.
Integrated Remediation of Soil and Groundwater, Russell

S. Dykes and Arlin C. Howles, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p244-249.
Soil Contamination Issues at Port Marine Terminals, Donald W. Rice, (Ports '92, David Torseth, ed., 1992), 239-230.

p288-300.

Petroleum products
Fingerprint Identification of Groundwater Petroleum
Contamination Using Synchronous Scanning Fluores
cence, Daniel York Pharr, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p579-584.

p5/9-584.

Petroleum refining

Case History: TRE At a Refinery/Chemical Plant, Carol

L. La Breche and Russell S. Dykes, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p555-560.

An Integrated Expert System for Operating a Petroleum

Refinery Activated Studge Process, Weibo Yuan, Michael K. Stenstrom, Naci H. Ozgur and David Okrent,
(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p480-485.

Nutrient Removal for Two Industrial Recycling Projects,

ed., 1992), p400-483. Nutrient Removal for Two Industrial Recycling Projects, Richard Sykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p382-387.

Petroleum transportation Earthquake Countermeasures for Lifelines in the Central and Eastern United States, T. D. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992, p168-19

Geochemical Evidence for Waning Magmatism and Polycyclic Volcanism at Crater Flat, Nevada, Frank V. Petry and Bruce M. Crowe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2356-2365.

pH
Characterization of a Heavy Metal Contaminated Site,
M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty,
I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p463-467.
A Comparison of Glass Reaction at High and Low SA/V:
PCT Vs. MCC-I, William L. Ebert and John K. Bates,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p934-942.
The Effects of Land Applied Water Treatment Residuals
on Soil Phosphorus, James R. De Wolfe and Brian A.
Dempsey, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p297-302.
Integrated Assessment of Acid-Deposition Effects on
Lake Acidification, Edward S. Rubin, Mitchell J.
Small, Cary N. Bloyd and Max Henrion, Ef Jan./Feb.
92, p120-134.
Metallurgical Residue for Solubilization of Metals from
Sewage Sludge, D. Couillard and G. Mercier, EE Sept./
Oct. 92, p808-813.

pH Control in Anaerobic Treatment of Industrial Waste-water, G. K. Anderson and G. Yang, EE July/Aug. 92, p551-567.

Phenol Removal from Kaolinite by Electrokinetics, Yal-cin B. Acar, Heyi Li and Robert J. Gale, GT Nov. 92, p1837-1852.

Phenol Removal from Kaolinite by Electrokinetics, Yal-cin B. Acar, Heyi Li and Robert J. Gale, GT Nov. 92, p1837-1852.

Phosphoric acid

Phosphoric acid Engineering Properties and Potential Uses of By-Product Phosphygypsum, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p250-263. Environmental Monitoring Plan for a Pilot Study Using Phosphogypsum as a Roadbed Material, Reid Lea, Adam Faschan and Marty Tittlebaum, (Utilization of Waste Materials in Civil Engineering Construction, 11992), p128-139.

Phosphorus

The Effects of Land Applied Water Treatment Residuals on Soil Phosphorus, James R. De Wolfe and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p297-302.

Linaweaver, ed., 1992), p297-302.

Impact of Flow Variability on Error in Estimation of Tributary Mass Loads, Stephen D. Preston, Victor J. Bierman, Jr. and Stephen E. Silliman, EE May/June 92, p402-419.

Liberty Reservoir Stormwater Retrofit Project, George G. Balog, William P. Stack, Kenneth T. Belt and Prakash Mistry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p346-351.

Partitioning Phosphorus Loads: Implications for Lake Restoration, Thomas M. Heidtke and Martin T. Auer, WR Sept./Oct. 92, p562-579.

Ensitivity of Non-Point Source Pollution Controls to Land Use, Oner Yucel and David W. Blaha, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p358-363.

Phosphorus removal

Chemical-Constituent Load Removal Efficiency of an Urban Detention Pond/Wetlands System in the Denver Metropolitan Area, Colorado, James R. Kunikel, Timothy D. Steele, Ben Urbonas and Jay Carlson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p352-357.

1992, p352-357.
Conditioning and Dewatering of Anaerobically Digested BPR Sludge, William R. Knocke, Jeffrey W. Nash and Clifford W. Randall, EE Sept./Oct. 92, p642-656.
Full Scale Side-By-Side Testing of BNR Technologies, Bruce B. Burns, Angela S. Essner, Dave L. Montgomery, Amarjit Sokhey and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p30-35.

p30-33.

Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwilo and Rudy S. Chow, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p12-17.

Prosphorus Removal by Automatic Backwash Filters at Back River WWTP, George G. Balog, Manu A. Patel, Thomas N. Lash and Christian Davies-Venn, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p24-29.

Photoelasticity

Dynamic Stresses in Granular Assemblies with Micro-structural Defects, A. Shukla, C. Y. Zhu and Y. Xu, EM Jan. 92, p190-201.

Experimental Photoelastic Analysis of Tunnels Containing Cracks, Adel Y. Akl, S. S. Abdel Salam, M. H. El Haddad and Gouda A. Mohamed, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p276-279.

Novel Photoelastic Approach in Analysis of Elliptical Holes in Thick Plates, Sameh S. Issa and G. A. Maamoun, EM Aug. 92, p1631-1645.

Application of Extremely Low Altitude Photogrammetry for Monitoring Coastal Structures, Richard B. Davis and Thomas R. Kendall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p892-897.

GPS/Positioned Digital Video for Airborne GIS Data Acquisition, Brent Wanless, SU Aug. 92, p80-89.

Photogrammetric Solution for Vehicle-Damage Investiga-tion, W. Faig, F. R. Wilson, D. King and T. Y. Shih, TE Nov./Dec. 92, p850-865.

Photographs

The Connecticut Photolog Laser Videodisc-Based Pave-ment Rating System, Richard C. Hanley and Donald A. Larsen, TE Mar/Apr. 92, p258-269.

Photography
Use of Machine Vision in Bedform Studies, Peter A.
Mantz and Wenxue Li, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p840-845.

Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

Modified QUAL2E Modeling of a Stream Acutely Im-pacted by Photosynthesis and Respiration, Rex. A. Tol-man, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p194-199.

Photovoltaic effect

Polycrystalline CdTe Solar Cells for Large-Scale Space Applications, John Trefny, Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p798-803.

Combustion Synthesis of Advanced Materials, J. J. Moore, H. J. Feng, N. Perkins and D. W. Readey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1389-1400.

Concrete Construction on the Moon, T. D. Lin and Nan Su. (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 359-1369.

The Microstructure of Hardened Cement Paste and Concrete, J. Francis Young, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p737-739.

MSW Incinerator Ash as Aggregate in Concrete and Ma-sonry, Rosmadi Abdul Rashid and Gregory C. Frantz, MT Nov. 92, p353-368.

Now 24, 7535-368.

Nowast Protocol for the Great Lakes Forecasting System, Chieh-Cheng J. Yen, Keith W. Bedford and David J. Schwah, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p140-148.

Physical Processes and Effects of Magmatism in the Yucca Mountain Region, Greg A. Valentine, Bruce M. Crowe and Frank V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2014-2024.

The Physiography and Engineering Constraints of the Continental Slope in the Northwestern Gulf of Mexico, William R. Bryant and Gregory R. Simmons, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1036-1050.

1992, p1030-1030.
Probabilistic Micromechanics in Constitutive Modeling of Granular Material, Ching S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p437-440.
Properties of Gypsum Wallboards Containing Fly Ash, Ramesh C. Joshi, Jonou O. Thomas and Rex B. Adam, MT May 92, p212-225.

The Remote Monitoring of Waste Glass Melter Product, K. K. Li and A. Schneider, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p533-540.

Time-Viscosity Relationships of Newtonian and Binghamian Grouts, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p663-675.

Alternative Study for the Breakwater and Fishing Pier Rehabilitation at Playland Park, Rye, New York, David W Yang, Michael J. McCarthy, Edward J. Schmeltz, Joseph Bonasia and Ralph Butler, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p632-645.

ssessing Time-Variant Bridge Reliability Due to Pier Scour, Peggy A. Johnson and Bilal M. Ayyub, HY June 92, p887-903.

Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Ports '92, David Torseth, ed., 1992), p737-748.

Design and Construction of Waterfront Facilities at U.S. Navy Homeport at Ingleside, Texas, Edward H. Stehmeyer, Jr., David W. Mock and Donald L. Goddeau, (Ports '92, David Torseth, ed., 1992), p644-656.

Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (Ports '92, David Torseth, ed., 1992), p275-287.

Effects of Footing Location on Bridge Pier Scour, J. Ster-ling Jones, Roger T. Kilgore and Mark P. Mistichelli, HY Feb. 92, p280-290.

Fifth Time Around, as California Pier Reappears, CE July 92, p12.

Free Vibration Analysis of Curved Thin-Walled Girder Bridges, Chang-Huan Kou, Steven E. Benzley, Jian-Yuan Huang and D. Allan Firmage, ST Oct. 92, p.2890-2910.

Lateral Analysis of Piers Constructed on Slopes, Moham-med A. Gabr and Roy H. Borden, GT Dec. 90, p1831-

Masonry as a Structural Material, Daniel P. Abrams, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p116-129.

Military Techniques for Expedient Repair of Earthquake Damaged Harbor Infrastructure, Lyndell Z. Hales and Ivan L. Sheall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p370-386.

Modifications to Coal Pier 6 Made Necessary by a Deeper Channel, Zolan Prucz, Barney T. Martin and Jerry L. Richstein, (*Ports '92*, David Torseth, ed., 1992), p164-

Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.

Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, Kevin A. Pierce and Lazzlo Buzasi, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p663-679.

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p58-71.

Optimum Geometries for Pier-Type Airport Terminals, S. Bandara and S. C. Wirasinghe, TE Mar./Apr. 92, p187-206

Pier and Wharf for U.S. Navy Homeport, Everett, Arn-finn Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (*Parts* '92, David Torseth, ed., 1992), p616-629.

Ports '92, 2 vols., David Torseth, ed., 1992, 0-87262-874-4, 1212pp. Proposed Seismic Design Method for Piers and Wharves, Robert E. Harn and Bankim C. Mallick, (*Ports '92*, David Torseth, ed., 1992), p403-417.

Seismic Rehabilitation of Seattle's Pier 69, David Pierce and Ronald E. Martinson, (Ports '92, David Torseth, ed., 1992), p418-428.

60., 1972), Porton A. Shallow Soil Mixing — A Case History, David Broomhead and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p564-576.

Signing Systems: Directional, Identity, and Graphic Sys-tems for the Port of Long Beach, Mackey W. Deasy, Wayne Hunt and Louis Rubenstein, (*Ports* '92, David Torseth, ed., 1992), p85-93.

Stability of Masonry Piers and Arches, Thomas E. Booth-by and Colin B. Brown, EM Feb. 92, p367-383.

Stabilization of Pier Foundation Using Jet Grouting Techniques, R. Parry-Davies, R. M. H. Bruin, G. Wardle and M. G. Nixon, Grouting, Soil Improvement and Geotynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p15e-168.

Sylvan Beach Pier Rehabilitation Study, Peter W. Soltys, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662.

Temporal Variation of Scour Around Circular Bridge Piers, Umesh C. Kothyari, Ramchandra J. Garde and Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.

Underwater Slope Failure, Port Hueneme, W. H. Roth, D. T. Liu, M. Tischuk and T. Hjort, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p940-955.

U.S. Navy Deployable Waterfront Facility, Glenwood Bretz, Julio Giannotti and Arturo Calisto, (Ports '92, David Torseth, ed., 1992), p520-534.

Vacuum Alumina Unloader for Port of Everett, Curtis O. Hecla, (Ports '92, David Torseth, ed., 1992), p143-149.

Freemesters

Evaluation of Dewatering and Treatment System at the
Chisman Creek Superfund Site, Procha Yodnane, Dennis W. Okorn and Burton M. Marshall, Environmental
Engineering Saving a Threatmed Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p250255.

Hydraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rice, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-

1364. Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports '92, David Torseth, ed., 1992), p376-389. Piezometers in Earth Dam Impervious Sections (Paper introduced by R. W. Beene and Clifford LeRoy McAnear), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p324-365.
Stope Displacement from Pile Driving, Richard E. Riker.

Slope Displacement from Pile Driving, Richard E. Riker, Donald G. Anderson and D. Dexter Bacon, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p292-309

Pile bearing capacities Model Uncertainty Representation in Geotechnical Reli-ability Analyses, Knut O. Ronold and Peter Bjerager, GT Mar. 92, p363-376.

Pile driving
Building KBES for Diagnosing PC Pile With Inductive
Learning, Yi-Cherng Yeh, Yau-Hwaug Kuo and D. S.
Hsu, CP Apr. 92, p200-219.

Hsu, CF Apr. 92, p200-219.
Driving Characteristics of Open-Toe Piles in Dense Sand, Richard D. Raines, Oscar G. Ugaz and Michael W. O'Neill, GT Jan. 92, P72-88.
Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports 92, David Torseth, ed., 1992), p376-389.
Pile Driving: Can it Cause Slope Movement? D. G. Anderson, R. E. Riker and B. P. Erickson, (Ports 92, David Torseth, ed., 1992), p350-363.
Pile Driving Quietly Benefits Hotel, CE June 92, p95.
Pipeline Response to Pile Driving and Adjacent Escava-

Pipeline Response to Pile Driving and Adjacent Excava-tion, P. W. Linehan, A. Longinow and C. H. Dowding, GT Feb. 92, p300-316.

Slope Displacement from Pile Driving, Richard E. Riker, Donald G. Anderson and D. Dexter Bacon, (Stability and Performance of Slopes and Ernbankments II, Ray-mond B. Seed, ed. and Ross W. Bevlanger, ed., 1992).

Wave Propagation in Solids, A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

Pile driving equipment
Pile Driving Quietly Benefits Hotel, CE June 92, p95.
Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.

Pile foundation design Piles Under Dynamic Loads, Geotechnical Special Publi-cation No. 34, Shamsher Prakash, ed., 1992, 0-87262-905-8, 270pp.

Dynamic Response Analysis of Pile Foundations by Using Variational Calculus, Toyoaki Nogami, Jian-Xiong Zhu and Takayoshi Ito, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p588-591.

Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

Pile foundations

An Alternative Analysis of Vibration Tests on Two Pile Group Foundations, Alex Sy, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p136-152.

Batter Piles and the Seismic Performance of Pile-Supported Wharves, W. H. Roth, H. Fong and C. de Rubertis, (Ports '92, David Torseth, ed., 1992), p336-

349.
Cone Models for a Pile Foundation, John P. Wolf, Jethro W. Meek and Chongmin Song, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p94-113.
Effects of Liquefaction on Lateral Pile Responses, T. Kagawa, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p207-223.
Evaluation of Performance of Two Piles Using Pressuremeter Method, Roger Frank, Nicholas Kalteziotis, Michel Bustamante, Stavros Christoulas and Haralambos Zervogiannis, GT May 91, p695-713.
First and Second Order Dynamic Subgrade Models for

bos Zervognannis, GT May 91, p695-713. First and Second Order Dynamic Subgrade Models for Soil-Pile Interaction Analysis, Toyoaki Nogami, Jiang-Xiong Zhu and Takayoshi ito, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p187-206. Interactive Base-Isolation Foundation System: I. Finite Element Formulation, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2048-2058.

nteractive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.
Long Piles Driven for New Orleans Superwharf, CE July 92, p21.

92, p.21.

Modal and Response Analyses of a Paper Machine Foundation, Jerry Chen and J. A. Bohinsky, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed. 1992), p574-581.

Modaline, McChines, of Pile Group Foundations.

Modeling the Stiffness of Pile Group Foundations, Toorak Zokais and Karl M. Romstad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p810-817.

Museum Floored on its Piles, CE Apr. 92, p85.

Museum Problem in Fries, C.E. Apr. 32, pos.).
Nonlinear Soil-Pile Interaction Model for Dynamic Lateral Motion, Toyoaki Nogami, Jun Otani, Kazuo Konagai and Hsiao-Lian Chen, GT Jan. 92, p89-106.

Offshore Pile System Reliability, Wilson H. Tang and Robert B. Gilbert, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p228-231.

1992), p228-231.
Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.
Piles Over Problems Sites, Issa S. Oweis and Edward M. Zamiskie, Jr., CE Apr. 92, p62-64.
Piles Under Dynamic Loads, Geotechnical Special Publication No. 34, Shamsher Prakash, ed., 1992, 0-87262-905-8, 270pp.
Pipeline Response to Pile Driving and Adjacent Formal

Pipeline Response to Pile Driving and Adjacent Excava-tion, P. W. Linehan, A. Longinow and C. H. Dowding, GT Feb. 92, p300-316. Spin-fin Piles Gain in Application, CE Jan. 92, p12-13.

Pile groups

An Alternative Analysis of Vibration Tests on Two Pile
Group Foundations, Alex Sy, Piles Under Dynamic
Loads, Shamsher Prakash, ed., 1992), p136-152.

Deformance of Pile Groups Adjacent to Deep

Analysis of Performance of Pile Groups Adjacent to Deep Excavation, Richard J. Finno, Samir A. Lawrence, Na-bil F. Allawh and Indra S. Harahap, GT June 91,

psys-4-yss.
Cone Models for a Pile Foundation, John P. Wolf, Jethro W. Meek and Chongmin Song. (Piles Under Dynamic Loads, Shamsher Praksah, ed., 1992), p94-113.
Dynamic Experiments on Two Pile Groups, H. El-Marsafawi, Y. C. Han and M. Novak, GT Apr. 92, ps/16-592.

Efficiency Formula for Pile Groups, Sayed M. Sayed and Reda M. Bakeer, GT Feb. 92, p278-299.

Modeling the Stiffness of Pile Group Foundations, Toorak Zokaie and Karl M. Romstad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p810-817.
Response of Model Pile Groups to Strong Shaking, W. D. Liam Finn and W. Blair Gohl, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p27-55.

Loudy, Shamsher Frakash, ed., 1992, p.21-33.
Seismic Pile-Group—Structure Interaction, G. Gazetas, K. Fan, T. Tazoh, K. Shimizu, M. Kavvadas and N. Makris, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93.

The Superposition Approach to Pile Group Dynamics, H. El-Marsafawi, A. M. Kaynia and M. Novak, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p114-135.

Pile han

Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.

Pile load tests

Caltrans/Private Sector Partner Pile Load Test, CE Oct. 92, p15,18. Case Study—Elliott Bay Marina Floating Moorage, Craig S. Funston, (Ports '92, David Torseth, ed., 1992),

p263-274. Pile Lateral Load Test in the Port of Los Angeles, Mat-thew F. Hunter, Allen M. Yourman, Gerald M. Diaz and Hsueh-Hsin Chu, (Ports '92, David Torseth, ed., 1992), p322-335.

Pile settlement

Further Contributions to Reliability-Based Pile-Settlement Analysis, S. T. Quek, Y. K. Chow and K. K. Phoon, GT May 92, p726-742.

Pile structures
Gate Maritime Wharf and Intermodal Facility,
Viswanath K. Kumar, William L. Allen and Thomas A.
Mantia, (Ports '92, David Torseth, ed., 1992), p43-57.
Proposed Seismic Design Method for Piers and Wharves,
Robert E. Harn and Bankim C. Mallick, (Ports '92,
David Torseth, ed., 1992), p403-417.

Dynamic Experiments on Two Pile Groups, H. El-Marsafawi, Y. C. Han and M. Novak, GT Apr. 92, p576-592.

Evaluation of Performance of Two Piles Using Pressure-meter Method, Roger Frank, Nicholas Kalteziotis, Michel Bustamante, Stavros Christoulas and Haralam-bos Zervogiannis, GT May 91, p695-713.

Analysis of a Wharf for a Container Terminal, Luis Her-nández Toca and José A. Arréllaga, (Ports '92, David Torseth, ed., 1992), p228-237.

Analysis of Laterally Loaded Shafts in Rock, John P. Carter and Fred H. Kulhawy, GT June 92, p839-855.

Bearing Capacity of Auger-cast Piles in Sand, William J. Neely, GT Feb. 91, p331-345. Bearing Capacity of Expanded-Base Piles with Compacted Concrete Shafts, William J. Neely, GT Sept. 90, p1309-1324

p1309-1324.

Cone Models for a Pile Foundation, John P. Wolf, Jethro W. Meek and Chongmin Song. (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p94-113.

Design and Construction of Waterfront Facilities at U.S. Navy Homeport at Ingleside, Texas, Edward H. Stehmeyer, Jr., David W. Mock and Donald L. Goddeau, (Ports '92, David Torseth, ed., 1992), p644-656.

Design, Construction, and Performance of a Baffled Breakwater, Jonathan W. Lott and Walter E. Huttienne, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p487-502.

Design of Bridge Pier Pile Foundations for Ship Impact.

riugnes, ed., 1992), p487-502.
Design of Bridge Pier Pile Foundations for Ship Impact,
Bogdan O. Kuzmanovic and Manuel R. Sanchez, ST
Aug. 92, p2151-2167.
Design of Piles in Permafrost Under Combined Lateral
and Axial Load, A. Foriero and B. Ladanyi, CR Sept.
91, p89-105.

Driving Characteristics of Open-Toe Piles in Dense Sand, Richard D. Raines, Oscar G. Ugaz and Michael W. O'Neill, GT Jan. 92, p72-88.

Dynamic Experiments on Two Pile Groups, H. El-Marsafawi, Y. C. Han and M. Novak, GT Apr. 92,

Dynamic Parameters Analysis of Piles, Xiao M. Zhu, Hsien P. Niu and Sao X. Zhang, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p224-240. Dynamic Soil-Pile-Structure Interaction—The State-of-Practice, Asadour H. Hadjian, Richard B. Fallgren and Mark R. Tufenkijan, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p1-26. Efficiency Formula for Pile Groups, Sayed M. Sayed and Reda M. Bakeer, GT Feb. 92, p278-299. Finite Element Simulation of Behavior of Laterally Loaded Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Loss of Ground During CFA Pile Installation in Inner Urban Areas, Jacek K. Leznicki, Melvin I. Esrig and Robert G. Gaibrois, GT June 92, p947-950.

Robert G. Gaibrois, GT June 92, p947-950.
 Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.
 Observed and Predicted Response of Piles Under Dynamic Loads, Vijay K. Puri and Shamsher Prakash, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p153-169.
 Pier and Wharf for U.S. Navy Homeport, Everett Arn.

Pier and Wharf for U.S. Navy Homeport, Everett, Arn-finn Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (Ports '92, David Torseth, ed., 1992), Date 5. Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

GT Jan. 92, p34-50.
Fre-Compression of Concrete Breasting Dolphins Solves Construction Problem, Robert A. Blowers, Alexander Matlin and Antoni J. Zelechowski, (Ports '92, David Torseth, ed., 1992), p602-615.
Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

Review of API Guidelines for Pipe Piles in Sand, Magued Iskander and R. E. Olson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p798-812. Scour Around a Vertical Pile in Waves, B. Mutlu Sumer, Jørgen Fredsøe and Niels Christiansen, WW Jan/Feb.

92, p15-31.

Seismic Pile-Group—Structure Interaction, G. Gazetas, K. Fan, T. Tazoh, K. Shimizu, M. Kavvadas and N. Makris, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93.

Frakash, ed., 1972, p.30-93; Site Improvement for a Steel Mill Complex, Eun C. Shin, Bang W. Shin and Braja M. Das, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-

Sci. Skin Friction Distributions on Piles in Sand, Nazrul I. Khan, John S. Templeton, Ill. and Michael W. O'Neill, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p783-797.

Determination of Fracture Toughness for Wood, Mikael Fonselius and Kirsti Riipola, ST July 92, p1727-1740.

Explicit Calculation of Pipe-Network Parameters, Paul F. Boulos and Don J. Wood, HY Nov. 90, p1329-1344. Innovative Rehab Celebrates 20th Year, CE June 92, p95.

Dimensionally Homogeneous Manning's Formula, Ben Chie Yen, HY Sept. 92, pl 326-1332. Transportation of Demineralized Water: Case Study, Ali A. Quraishi and Muhammad S. Al-Amry, TE July/Aug. 92, p576-585.

Velocity and Depth of Flow Calculations in Partially Filled Pipes, A. Saatci, EE Nov/Dec. 90, p1202-1208.

Energy Loss at Combining Pipe Junction, Marc Serre, A. Jacob Odgaard and Rex A. Elder, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p766-771.

Pipe laying

A Fourier Series Solution to Bottom Roughness Induced Stresses During Pipe Laying, Naum Kershenbaum, J. T. Powers and Donald Chang, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1006-1035.

Pipe lining Lightweight Grout Eases Sewer Rehab, CE Feb. 92, p.14,16.

p.14,16.
ater Main Rehabilitation Using Silicote Lining, Steven E. Cooper and Gregory C. Heitzman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.772-773.

Karamouz, ed., 1992), p772-773.

Pipe networks
Cost of Rehabilitation of Water Distribution Systems,
Peter K. Mac Ewen, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p770-771.

Efficient Calculation of Transient Flow in Simple Pipe
Networks, Bryan W. Karney and Duncan McInnis, HY
July 92, p1014-1030.

Explicit Calculation of Pipe-Network Parameters, Paul F.
Boulos and Don J. Wood, HY Nov. 90, p1329-1344.

Leaks in Pipe Networks, Ranko S. Pudar and James A.

Liggett, HY July 92, p1031-1046.

Numerical Method for Finding Leaks in Pipe Networks,
Ranko S. Pudar, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p809815.

User Interface for Pipe Network Program, István Lippai, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1049-1054.

Pipeliae design
Landslide Hazard Analysis for Pipeline Design, Northeast Utah, Jeffrey R. Keaton, Robert M. Robison and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204.
Pipe Runs from Prison, Welcomed by Town, CE May 92,

pro. as Floor Wave-Induced Water Kinematics for Design of Pipeline, Leon Borgman and Robert Hudspeth, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p444-466.

Pipelines
Calculating Flow in Manifold and Orifice System, Fazal
H. Chaudhry and Luisa F. R. Reis, EE July/Aug. 92,

p383-596. Case Studies of Semi-Closed Pipeline Systems for Flexible Deliveries, John L. Merriam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p468-473. Case Study of an Offshore Horizontal Boring, John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p697-712. Dallas Goes Trenchless, A. V. Almeida, CE Sept. 92, p71-73.

p71-73.

Design Criteria and Specifications for Pipeline Rehabilitation Projects, Lawrence I. Erdos, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p742-747.

Earthquake Countermeasures for Lifelines in the Central and Eastern United States, T. D. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p168-191.

Efficient Calculation of Transient Flow in Simple Pipe Networks, Bryan W. Karney and Duncan McInnis, HY July 92, p1014-1030.

Homopolar Pulse Butt Welding of API 5L Line Pipe, Paul

July 92, pl014-1030.

Homopolar Pulse Butt Welding of API 5L Line Pipe, Paul W. Hasse, Zwy Eliezer, Robert Carnes, John Gully and Mike Harville, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p813-827.

In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p334-339.

Influence of Liquid Length Variation in Hydraulic Transients, Enrique Cabrera, José Abreu, Rafael Pérez and Antonio Vela, HY Dec. 92, p1639-1650.

Infrared Thermographic Sensing of Sewer Pipeline Problems, Gary J. Weil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p890-895.

Perils of Point Loma, John Prendergast, CE Nov. 92,

Pipeline Response to Pile Driving and Adjacent Excava-tion, P. W. Linehan, A. Longinow and C. H. Dowding, GT Feb. 92, p300-316.

GT Feb. 92, p300-316.

Planning, Assessing and Implementing Pipeline Rehabilitation Options, B. Jay Schrock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741.

Plastic Pipe Takes Sewer Under Creek, CE July 92, p94.

Plastic Fipe Takes Sewer Under Creek, Ct. July 92, 594.
State-Space Analysis and Control of Slow Transients in Fipes, Masashi Shimada, HY Sept. 92, p1287-1304.
The Total System Solution, David J. Daley and James B. Hinte, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647.

Composites Performance in the Infrastructure, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p532-545.

1992), p532-545.
Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CD June 92, p283-302.
General Mechanism of Turbulence, Wenxiong Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.
Laboratory Testing of Ultimate Capacity of Dented Tubular Members, Einar Landet and Inge Lotsberg, ST Apr. 92, p1071-1089.
Leaks in Pipes Networks, Panke, S. Budge, M. S. Budge, M.

Apr. 92, p1071-1089.

Leaks in Pipe Networks, Ranko S. Pudar and James A. Liggett, HY July 92, p1031-1046.

Performance of Axially Loaded Pipe Piles in Sand, Leland M. Kraft, Jr., GT Feb. 91, p272-296.

PREPS: Analysis of Pipe Supports and Other Structures on the PC-386, Gregory Nakhimovsky and Charles E. Doberty, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p543-550. Turbulence, and Energy Loss, at Combining Pipe Junctions, Marc Serre and A. Jacob Odgaard, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p389-392.

Unidirected Twined-Strand Composites and Their Uses,

Unidirected Twined-Strand Composites and Their Uses, Charles E. Kaempen, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p346-559.

Piping, erosion
Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p533-554.
Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p120-203.
Sukhanalic Fracturing in Low Dams of Dispersive Clay

Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p102-03.

Hydraulic Fracturing in Low Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), James L. Sherard, Rey S. Decker and Norman L. Ryker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p94-119.

Innovative Rehab Celebrates 20th Year, CE June 92, p95.

Mathematical Model for Piping, M. A. Koenders and J. B. Sellmeijer, GT June 92, p943-946.

Pinhole Test for Identifying Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284.

Piping in Earth Dams of Dispersive Clay (Paper introduced by Norman L. Ryker, James L. Sherard, Rey S. Decker and Norman L. Ryker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p55-93.

Some Engineering Problems with Dispersive Clays (Paper

cu., 1972, p.3-93.
Some Engineering Problems with Dispersive Clays (Paper introduced by Lorn P. Dunnigan), J. L. Sherard, L. P. Dunnigan and R. S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh,

James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p301-311.
Stabilizing Drop Structure by Drainage Modifications, Larry D. Armer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p39-44.

"iping system

Comparing Object-Oriented and Relational Data Models for Project Control, Jae-Jun Kim and C. William Ibbs, CP July 92, p348-369.

Computer Aided Design for Deep Water Offshore Risers, C. P. Johnson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p243-257. Design of Irrigation Distribution System, Steve Robertson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p462-467.

Plane strain

Analysis of Internal Discontinuities in Geo-Materials,
Dunja Perić, Stein Sture and Kenneth Runesson, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p292-295.

Evaluation of Plastie Bifurcation for Plane Strain versus
Axisymmetry, Dunja Perić, Kenneth Runesson and
Stein Sture, EM Mar. 92, p512-524. for Geotechnical
Problems, Massaru Hoshiva and Atsushi Sutoh, (ProbaProblems, Massaru Hoshiva and Atsushi Sutoh, (Proba-

Extended Kalman Filter-Finite Element for Geotechnical Problems, Masaru Hoshiya and Atsushi Sutoh, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), pl 28-131.

Kinematically Unconstrained Compression of Soft Clay, Richard J. Finno and Yongheun Rhee, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 43-157.

Pressure of Crushed Ice as Mohr-Coulomb Material Against Flat, Axisymmetric Indentor, Dat Duthinh, CR Dec. 92, p139-151.

Ultrasonic Wave Scattering by a Crack in a Composite Plate, W. M. Karunasena, A. H. Shah and H. D. Mair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559.

Plane waves Influence of Seafloor on Acoustic Plane Wave, L. H. Huang, EM Oct. 92, p1987-2004.

Activities of the North Central Texas Council of Governments in Urban Storm Water Planning, John Promise and Samuel W. Brush, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhownik, ed., 1992). p43-49.

shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p43-49.
Agricultural Option Contracts, John F. Scott, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p138-143.

Al Supported Process Planning for Automated Rebar Fabrication, Md. Salim and Leonhard E. Bernold, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p872-879.

Baltimore Waste Water Infrastructure a Health Plan, George G. Balog, Gary A. Wyatt and Edward Serp, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p472-9432.

Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A. Evans and Robert Blama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-355.

Building a Pipeline—Not a "Flow Through" Process, Roddy Rogers, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p591-597.

597

391.
The Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412.

ps01-412.
Characterization of Emplacement Strategies for Lunar and Mars Missions, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1631-1644.
A Companyation Appears to Acceptainer Terminal Plan.

Miller, ed., 1992), p1631-1644.

A Comprehensive Approach to Container Terminal Planning: Striking a Balance, William D. Friedman, (Ports '92, David Torseth, ed., 1992), p24-42.

"Compression Planning" for Continuous Improvement in Quality Programs, Yolanda A. Willis and Frank C. Hood, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1287-1297.

Computer Modeling Responsibilities for Municipalities, Michael L. Deas, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p338-

Conjunctive-Use Planning in Mad River Basin, California, Joy Matsukawa. Brad A. Finney and Robert Willis, WR Mar./Apr. 92, p115-132.

Container Terminal Gates Flexible Design for a Dynamic Environment, Larry Nye, (Ports '92, David Torseth, ed., 1992), p912-925.

Container Terminal Planning: 2001, James E. Davis, (Ports '92, David Torseth, ed., 1992), p15-28.

Cost Effective Risk Allocation for Coastal Engineering Projects, Robert J. Smith, (Coastal Engineering Practice' '92, Steven A. Hughes, ed., 1992), p1021-1036.

Coupled Water-Wastewater Management Issues, Kip Du-chon and Robert Troxler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p529-531.

p329-331.

Praft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Toseth, ed., 1992), p939-1000.

seth, ed., 1992), p939-1000.

Praft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwaters, ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Ennio DeCurtis, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Douglas Sethness, Jr.), (Ports' 92, David Torseth, ed. 1992), p1001-1069.

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE Ports and Harbors Task Committee (Paper Prepared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster), (Ports '92, David Torseth, ed., 1992), p1070-1151.

Dry Creek Watershed Flood Control Plan: A Case Study, Eric S. Clyde, M. N. Saquib and Dennis J. Huff, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p287-292.

Empirical Simulation of Future Hurricane Storm Histories as a Tool in Engineering and Economic Analysis, Leon Borgman, Martin Miller, Lee Buller and Robin Reinhard, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p42-65.

Engineering Aspects of Wetland Design, Donald F. Hayes and Michael R. Paiermo, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p344-349.

Evaluation Method for Advanced Acid Rain Compliance Technology, H. Christopher Frey and Edward S. Ru-bin, EY Apr. 92, p38-55.

A Facility Programming Product Model, Gregory M. Perkinson, François Grobler and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p41-48.

Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

Graphical Object-Oriented Simulation System for Con-struction Process Modeling, L. Y. Liu and P. G. Ioan-nou, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1139-1146.

Group Prioritization System for Army Military Construc-tion, Bruce C. Goettel, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p49-56.

Housing Opportunity or Social Engineering Implement-ing the Jobs-Housing Relationship—The Town of Wel-lington Experience, Jean E. Lindsey, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

Hydropower, Water Quality and Waste Discharge, Shoou-Yuh Chang, Shu-Liang Liaw, Steven F. Rails-back and Michael J. Sale, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Hansen and H. O. Madsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p312-315.

ett., 1992), p312-313.
Interfacing with the Public on Water-Related Issues—
What TVA is Doing, Janet C. Herrin and Arland W.
Whitlock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p293-298.

Iutions, Mohammad Karamouz, ed., 1992.), p293-298.
Issues in Hydropower Modeling Using GEMSLP Algorithm, K. K. Reznicek and S. P. Simonovic, WR Jan/Feb. 92, p54-70.
Land Reclamation Design for the Port of Los Angeles' 2020 Plan, J. Warwar and R. Wittkop, (Ports '92, David Torseth, ed., 1992), p577-590.

Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resource-Planning and Management: Saving a Threat-end Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992, p225-230.

Machine Learning in Planning and Control, Shaopei Lin, Zhenyi Zhao and Yingian Soong, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p991-998.

Managing Existing Reservoirs to Meet New Challenges, Morris Israel and Jay R. Lund, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p673-678.

Managing Large Complex Projects, William B. Derrickson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Maste Management Program Committee, 1992), p1751-1757.

Mars Basjing, Brent Shewmood (Engineering Control

Mars Basing, Brent Sherwood, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1964-1975.

Microcomputer-Based Project Management for Small En-gineering Firms, Thomas E. Glavinich, ME Jan. 92, p53-62.

p53-62.

Modeling of a Large-Scale Water Distribution System, Nien-Sheng Hsu, Peter W. F. Louie and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p598-603.

A Multi-objective Criteria Analysis for Alternative Route Planning, Amy Ziotsky, Michael P. Gutzmer and Guy M. Evasco, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p474-479.

Ontario Hydro's Plan for Used Nuclear Fuel, P. D. Stevens-Guille, H. A. Howes and J. Freire-Canosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p250-255. mittee, 1992), p250-255.

mittee, 1992, p250-255.
Operations Planning for Space Station FREEDOM—and
Beyond, Stephen S. Gibson, Thomas E. Martin and H.
Jeffrey Durham, (Engineering, Construction, and Operations in Space III), willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p1500-1511.
Overview of AWARE: A Software Tool for Balancing
Power and Nonpower Values in Water Resource Planning, Jennie S. Rice, (Risk-Based Decision Making in
Water Resources V, Yacov Y, Haimes, ed., David A.
Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p108116.

Planning and Budgeting for FAA Facilities and Equip-ment, James D. Bishop, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p239-243.

anning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Pre-pared by Fred A. Klancnik), (Ports '92, David Torseth, ed., 1992), p937-938.

Planning and Design Guidelines for Small Craft Har-bors—Economics and Finance, ASCE Ports and Har-bors Task Committee (Paper Prepared by Lawrence E. Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports '92, David Torseth, ed., 1992), p1152-1183.

Planning and Management of Water-Resource Systems in Developing Countries, M. Miloradov, WR Nov./Dec. 92, p603-619.

p603-619.
 Planning and Operation of a Multi-Reservoir Water Distribution System, Ali Diba, Peter W. F. Louie, Manouchehr Mahjoub and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p316-321.
 Planning Centralized Materials Recovery Facilities, Renée A. Lawver and Jay R. Lund, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p537-542.
 Planning, Design and Interestation of a Computeriod Terrorical Terr

Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.

Planning for Construction Automation by Integrating In-formation Flow with Software and Hardware Controls, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p856-863.

Planning Simulation Model of Irrigation District, Jesús Chávez-Morales, Miguel A. Mariho and Eduardo A. Holzapfel, IR Jan./Feb. 92, p74-87. Planning Your Negotiation, Michael Lee Smith, ME July 92, p254-260.

Planning/Analysis of VPA's Norfolk North Terminal, Thomas Ward, Richard A. Woodman and Bernardo de Castilho, (Ports '92, David Torseth, ed., 1992), p134-

142.
The Potential Application of Military Fleet Scheduling Tools to the Federal Waste Management System Transportation System, I. G. Harrison, R. B. Pope, R. D. Kraemer and M. R. Hilliard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1324-1329.

Management Program Committee, 1992), p.1324-1329.
Proposed Development of South Central Florida Hydrologic Ecosystem Model, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threatmend Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.707-711.
The Role of the Repository Implementer in Providing and Demonstrating Safe Disposal of Radioactive Wastes, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.102-105.
SEI In-Space Operations and Support Challenges, Ronald Caldwell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.1476-1487.
Seismic Survey Considerations in the Planning and Design Construction and Design Construction

Seismic Survey Considerations in the Planning and De-sign of Dredging Projects for Marine Terminal Facili-ties, Charles J. Natale, Jr., Thaddeus A. Nowak, Jr. and Bruce A. Adams, (Ports '92, David Torseth, ed., 1992),

Simulating THM Formation Potential in Sacramento Delta: Part I, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p513-529.

Simulating THM Formation Potential in the Sacramento Delta: Part II, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p530-542.

wn sept. Oct. 24, p330-342. Spaceborne Construction and Operations Planning: Decision Rules for Selecting EVA. Telerobot, and Combined Work-Systems, Jeffrey H. Smith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1988-1992.

Spanish High Level Radioactive Waste Management Sys-tem Issues, J. M. Espejo and A. R. Becciro, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992).

p18-24

Spiral Mining for Lunar Volatiles, H. H. Schmitt, G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170.

Miller, ed., 1992), p1162-1170.
Strategic Planning for Technology Development, Eitan S. Agai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1036-1041.
Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chilcote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p1-14.

Systems-Engineering Methodology for Engineering Plan-ning Applications, Brian G. Hoefler and Brian W. Mar, El Apr. 92, p113-128.

Texas High-Speed Rail Inches Along, CE May 92, p20. Upgrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alexander Surko, Jr., (Ports '92, David Torseth, ed., 1992). p802-814.

Description of the Development of Negotiation Tools, Allison M. Keyes and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p68-73.

Search of Solutions, Monammad Karamouz, ed., 1992), p68-73.

Usefulness of Low-Cost Watershed Monitoring: A Case Study, James G. Turek and David W. Blaha, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p712-717.

Visioning: The Future of Civil Engineering, C. R. "Chuck" Pennoni, El July 92, p221-233.

Water Planning Using an Expert GIS, Daene C. McKirney, David R. Maidment and Mustafa Tanriverdi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p219-224.

Water Quality Management Planning—Bird River Watershed, Alan Cavacas, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101.

Water Resource Systems Models: Their Role in Planning, Daniel P. Loucks, WR May/June 92, p214-223.

Plastic analysis

Analysis for Soil Reinforcement with Bending Stiffness, R. A. Jewell and M. J. Pedley, GT Oct. 92, pl 505-1528. Simple Rigid Plastic Model for Seismic Tilting of Rigid Walls, Raj Siddharthan, Samia Ara and Gary M. Nor-ris, ST Feb. 92, p469-487.

Geometric and Material Nonlinear Analysis of Thin-Walled Beam-Columns, J. L. Meek and W. J. Lin, ST June 90, p1473-1490.

Plastic design Locally Buckled Plastic Hinge Behavior Under Monotonic and Cyclic Loading Condition, Eun-Taik Lee and G. C. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.

Plastic hinges
Moving Hinge in Large-Displacement Problems, F. Lu
and A. N. Sherbourne, EM Sept. 92, p1840-1849.

Plastic pipes
Plastic Pipe Takes Sewer Under Creek, CE July 92, p94.
Polyoletin Plastic Water Service Line Performance,
Richard E. Chambers, (Materials: Performance and
Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p585-597.

Simple and Accurate Friction Loss Equation for Plastic Pipe, R. D. von Bernuth, IR Mar./Apr. 90, p294-298.

Plastic properties
Collapse Mode of Elastic-Plastic Structures, F. Giambanco, T. Panzeca and M. Zito, EM June 92, p1083-1092.
Equivalent Linearization for Seismic Responses. 1: Formulation and Error Analysis, Young J. Park, EM Nov.

92, p2207-2226.

Single-Hardening Model with Application to NC Clay, Poul V. Lade, GT Mar. 90, p394-414.

Plastic theory
On the Bifurcation of Elasto-Plastic Crystals During Multiple Slip, Ronaldo I. Borja and Jon R. Wren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p284-287.

Anisotropic Hardening Plasticity Model for Sands, Robert Y. Liang and Hann-Ling Shaw, GT June 91, p913-933.

p913-933.
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. I: Theory, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p229-245.
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. II: Verification, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p246-265.

Associative Plasticity for Dilatant Soils, Panos D. Kiousis and Ali A. Abdulla, EM Apr. 92, p763-785.

Comparative Evaluation of Plasticity Theories Against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.236-239.

Comparative Evaluation of Plasticity Theories against Tension-Torsion Test at Finite Strain, Ali H. Al-Adhib and Kerry S. Havner, EM Oct. 92, p.2104-2126. Compressive Softening Model for Concrete, Eiji Mizuno and Shigemitsu Hatanaka, EM Aug. 92, p.1546-1563.

Computational Gradient Plasticity, R. de Borst, H. -B. Mühlhaus and J. Pamin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p776-779.

Constitutive Model for Concrete in Strain Space, O. A. Pekau, Z. X. Zhang and G. T. Liu, EM Sept. 92, p1907-1927.

Debonding of a Inhomogeneity from a Plastic Matrix, Alan J. Levy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p252-255.

Dynamic Analysis of Elastoplastic Softening Discretized Structures, C. Comi, A. Corigliano and G. Maier, EM Dec. 92, p2352-2375.

Dynamic Elastic-Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. 92, p2005-2016.

Effect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p1796-1814.

Effect of Soil Plasticity on Cyclic Response, M Vucetic and Ricardo Dobry, GT Jan. 91, p89-107.

Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov./Dec. 92, p848-864.

An Evaluation Study of Modified Mohr-Coulomb and Cap Models, Hamdan N. Al-Ghamedy and Sahel N. Abduljauwad, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p717-720.

Free Boundary, Fluid Flow, and Seepage Forces in Excavations, Ronaldo I. Borja, GT Jan. 92, p125-146.

Generalized Creep and Stress Relaxation Model for Clays, Ronaldo I. Borja, GT Nov. 92, p1765-1786. Load Shortening in Plastic Buckling of Cylinders, Marwan El-Bkaily and Ralf Peek, EM Sept. 92, p1892-

1906.

Micromechanical Characterization of Damage-Plasticity in Metal Matrix Composites, George Z. Voyiadjis and Peter I. Kattan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl03-

Moving Hinge in Large-Displacement Problems, F. Lu and A. N. Sherbourne, EM Sept. 92, p1840-1849. Numerical Study of Soil Anisotropy, A. Anandarajah, EM Jan. 92, p211-216.

Stability of Systems of Rigid Bodies by Bounding Theorems, Thomas E. Boothby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p904-907.

Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, David J. Stevens and Dajin Liu, EM June 92, p1184-1200.

Strain-Based Damage Deactivation in Concrete, N. R. Hansen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p486-489.

High Strength, Low Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p363-372.

Rheological Properties of Microfine Cement Grouts with Additives, Ulf Håkansson, Lars Hässler and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p551-563.

Actively Controlled P-F Based Sliding Structures, Sohail M. Qureshi, Kiyoshi Uno and Hajime Tsutsumi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p324-327.

And it Tastes Great, Too, CE Aug. 92, p8.

Collapse Mode of Elastic-Plastic Structures, F. Giamban-co, T. Panzeca and M. Zito, EM June 92, p1083-1092.

Investigation of the Behavior of Reinforced Plastic Col-umns with Concrete Core, Saeed Daniali, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p666-676.6. Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992, 0-87262-880-9, 776pp. Overlays on Deck, Paul Tarricone, CE Sept. 92, p42-45. Plastic Waste for Low-Weight Embankments, H. El Ghoche, C. Coulet and D. Daudon, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1368-1379. 1379

1379.
Polyolefin Plastic Water Service Line Performance, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p585-597.
Properties of Composites Using Recycled Plastics, Karim S. Rebeiz, David W. Fowler and Donald R. Paul, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381.
Unidirected Twined-Strand Composites and Their Uses.

Unidirected Twined-Strand Composites and Their Uses, Charles E. Kaempen, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p546-559.

Winter Operability: Equipment Problems and Their Remedies, Deborah Diemand, CR Sept. 92, p124-137.

Plates

Analysis of Thick Circular Plates Undergoing Large Deflections, M. Gorji, J. A. Abuyan and K. S. Y. Li, AS Jan, 92, p138-153.

Bending of Thin Plate with Three-Point Support, Alexander Azarkhin, ST May 92, p1416-1419.

Boundary-Continuous Fourier Solution for Clamped Mindlin Plates, Humayun R. H. Kabir and Reaz A. Chaudhuri, EM July 92, p1457-1467.

Buckling of Skew Plates and Corner Condition for Simply Supported Edges, C. M. Wang, K. M. Liew and W. A. M. Alwis, EM Apr. 92, p651-662.

Critical Review of Thin-Plate Stability Equations, John Platt, Gwynne Davies and Cyril Snell, EM Mar. 92, p481-495.

Destabilizing Effect of Magnetic Damping in Plate Strip, Destabilizing Effect of Magnetic Damping in Plate Strip,

Destabilizing Effect of Magnetic Damping in Plate Strip, Jong S. Lee, EM Jan. 92, p161-173.

Eccentrically Loaded Plates on Reinforced Subgrades, Vito A. Guido and John J. Nocera, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1116-1128.

1128. Effects of Dead Loads in Dynamic Plates, Hideo Takabatake, ST Jan. 92, p34-51. Elastic Buckling Coefficients for Long, Unstiffened Plates, Julie Mark Cohen, EM Dec. 92, p2491-2496. Elastic Buckling of Incomplete Composite Plates, Koichi Sato, EM Jan. 92, p1-191. Elastic Buckling of Rectangular Plates with Curved Internal Supports, K. M. Liew and C. M. Wang, ST June 92, p1480-1493. Elexible Plates for Central of Stress Distribution. Manual

p1480-1493.

Flexible Plates for Control of Stress Distribution, Nenad Gucunski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p592-595.

The Flow in the Front Stagnation Region of a Square Plate with a Small Disturbing Wire in its Upstream, T. C. Su and Q. X. Lian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p470-473.

p470-473.
Fundamental Frequency of Tapered Plates by Differential Quadrature, Anant R. Kukreti, Jalaleddin Farsa and Charles W. Bert, EM June 92, p1221-1238.
Hypar Shell on Pasternak Foundation, D. N. Paliwal, S. N. Sinha and A. Ahmad, EM July 92, p1303-1316.
Improved Rectangular Element for Shear Deformable Plates, Fuh-Gwo Yuan and Robert E. Miller, EM Feb. 92, p312-328.
In Plane Nonel, inear, Random, Vibration of Composite.

p312-328.
 In-Plane Non-Linear Random Vibration of Composite Plates, Ronald S. Harichandran and Ahmad Hawwari, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p188-191.
 Macromodeling of Complex Composites, P. K. Basu, (En-gineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1071-1074.
 Mechanics of Shape Optimization in Plate Buckling, Mahesh D. Pandey and Archibald N. Sherbourne, EM June 92, p1249-1266.
 New Soline Eniste Flement for Plate Bending S. C. Fan

New Spline Finite Element for Plate Bending, S. C. Fan and M. H. Luah, EM June 92, p1065-1082.

Nonlinear Free Vibration of Laminated Composite Plates, Alavandi Bhimaraddi, EM Jan. 92, p174-189. Novel Photoelastic Approach in Analysis of Elliptical Holes in Thick Plates, Sameh S. Issa and G. A. Maamoun, EM Aug. 92, p1631-1645. Numerical and Experimental Studies of Vibration of Im-

Maamoun, EM Aug. 92, p1631-1645.
Numerical and Experimental Studies of Vibration of Impact Damaged SMC Composite Plates, Shive K. Charlurvedi and Pay-Jye Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1063-1066.
Optimal Design for Plate Buckling, W. R. Spillers and Robert Levy, ST Mar. 90, p850-858.
Optimum Design of Laminated Composites, R. S. Salzar, F. W. Barton and R. D. Ramsey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1323-1334.

p1323-1334.

p1325-1334.
Plates on Elastic Foundation, David S. Chilton and Jerzy W. Wekezer, ST Nov. 90, p3236-3241.
Refined Analysis of Load Distribution Factors for Bridges, M. A. Issa, Huiming Li, M. Arockiasamy, M. Shahawy and M. Issa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p260-263.

Reliability Analysis of Plates with Initial Deflection by Entropy Model, Miyamura Atsunori, Kohama Yoshiro and Takada Toyofumi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., Structural and G 1992), p559-562.

1992), p559-562.
Reliability of Degrading Dynamic Systems with Applications, Mircea Grigoriu and Igor Rychlik, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p300-303.
Response of Plates of Arbitrary Shape Subject to Static Loading, K. M. Liew, EM Sept. 92, p1783-1794.
Response Variability and Reliability of Plates Using the Weighted Integral Method, Friedrich J. Wall and George Deodatts, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p41-44.

A Shear Locking Free Three-Node Triangular Plate Bend-

1992), p41-44.

A Shear Locking Free Three-Node Triangular Plate Bending Element for Moderately-Thick and Thin Symmetrically Cross-Ply Laminated Plates, Humayun R. H. Kabir, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p552-555.

Simultaneous Design and Control of Stiffened Laminated Composite Structures, Luis Mesquita and Manohar P. Kamat, AS Jan. 92, p111-126.

Stiffened Sheathings of Orthotropic Cylindrical Shells, P. Rigo, ST Apr. 92, p926-943.

Tests of Cold-Formed Channels with Local and Distortional Buckling, Young B. Kwon and Gregory J. Hancock, ST July 92, p1786-1803.

Thermomechanical Buckling of Multilayered Composite Plates, Ahmed K. Noor and Jeanne M. Peters, EM Feb. 92, p351-366.

Transition Plate-Bending Elements for Compatible Mach

92, p351-366.

Tansition Plate-Bending Elements for Compatible Mesh Gradation, Chang-Koon Choi and Yong-Myung Park, EM Mar. 92, p462-480.

Ultrasonic Wave Scattering by a Crack in a Composite Plate, W. M. Karunasena, A. H. Shah and H. D. Mair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559.

Variational Solutions of the Von Karman Plate Theory Based on a Mixed Formulation, Wan-Lee Yin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p656-659.

Wave Propagation in Fluid Loaded Periodic Structures, Michael L. Accorsi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p212-215.

Platform

Platforms
The Affordable Space Platform: The STS External Tank, Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Stare, ed. and Russell J. Miller, ed., 1992), p945-956.
Assessment of a SSF Servicing Facility, Rohan Zaveri, Scott Geels, Erlinda Kiefel, Dan Uhlig and Benton Clark, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1668-1679.
Back to the Future: A Saturn V-Based Low Earth Orbital Transportation Node, Thomas J. Frieling, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p957-968.

Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p308 319.

319.

EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1656-1667. Evolution of the Space Station Freedom Module Pattern, Marston Gould, James Hendershot and Rudy Saucillo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p975-986.

A Facility for Training Space Station Astronauts, Ankur

A Facility for Training Space Station Astronauts, Ankur R. Hajare and James R. Schmidt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1645-1655.

410

p1645-1655.
The German Participation in the Soviet MARS 94/96 Mission, Klaus Proetel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Strinsture, ed. and Russell J. Miller, ed., 1992), p2293-2304.
Hedratecture in Severe Climates, Joseph J. Mangan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-170.
Messured and Simulated Response of a Small Semisub-

Measured and Simulated Response of a Small Semisub-mersible Moored in Deep Water, Robert F. Zucck, Stuart F. Pawsey and Steve J. Leverette, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p114-128.

1992), p114-128.
A Methodology for Development of Spaced-Based Assembly Operations, Scott Peppin, Jeff Morrow and Joel Loudenslager, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1035-1047.
On-Orbit Robotics Assembly and Operations of a Nuclear Mars Transfer System, W. J. G. Brimley, H. Kleinberg and H. H. Woo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1413-1422.
Operations Planning for Space Station EREEDOM. and

Operations Planning for Space Station FREEDOM—and Beyond, Stephen S. Gibson, Thomas E. Martin and H. Jeffrey Durham, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1500-1511.

Space Station & Lunar/Mars Life Support Research, Win-ston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1690-1700.

Space-Based Assembly Sequence Formulation for Evalua-tion of Large Orbital Assemblies, Steve Jolly, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1530-1541.

miller, etc., 1992.), p1.330-1341.

Spaceborne Construction and Operations Planning: Decision Rules for Selecting EVA. Telerobot, and Combined Work-Systems, Jeffrey H. Smith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1988-1995.

Plumes
Destruction of Stratification By Bubble Plume, W. D. Baines and A. M. Leitch, HY Apr. 92, p559-577.
From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314.
Gas Transfer in Diffused Bubble Plumes, Steven C. Wilhelms and Sandra K. Martin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p317-322.
Mixing. Dissersion. and Resuspension in Vicinity of

Mixing, Dispersion, and Resuspension in Vicinity of Ocean Wastewater Plume, Libe Washburn, Burton H. Jones, Alan Bratkovich, T. D. Dickey and Ming-Sue Chen, HY Jan. 92, p38-58.

Plume Movement and Mixing in Heterogeneous Aquifer, Salva Rashad, John Hoopes, Craig Fergusson and Tswn-Syau Tsay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p180-182

Pollutant Transport Modelling in Large River Plumes, J. A. Stronach, C. R. Murthy and T. S. Murty, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1922), p759-770.
Similarity Solutions of Starting Jets and Starting Plumes, Vincent H. Chu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p600-603.

Statistical Decision Analysis for Interception Wells, Hewa A. Wijedasa and Marian W. Kemblowski, (Irri-gation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p116-

Plunging flow
Density Currents Entering Lakes and Reservoirs, Vahid
Alavian, Gerhard H. Jirka, Richard A. Denton, Marc
C. Johnson and Heinz G. Stefan, HY Nov. 92, p1464-1489.

Pipe Piunge Pool Energy Dissipator, Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323.
Use of Density Current to Modify Thermal Structure of TVA Reservoirs, Vahid Alavian and Pete Ostrowski, Jr., HY May 92, p688-706.

Jr., HT May 72, pose-700.

Pneumatic systems

Design of Pneumatic Diffuser System, Steven C.

Wilhelms, Charles W. Downer and Richard E. Price,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1929, p. 1055-1060.

Large-Scale Loading Tests of Shallow Footings in Pneumatic Caisson, Osamu Kusakabe, Yoshito Maeda and
Masatoshi Ohuchi, GT Nov. 92, p1681-1695.

Point pollution

Activities of the North Central Texas Council of Governments in Urban Storm Water Planning, John Promise and Samuel W. Brush, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Controlling Nitrogen in Coastal Waters, Rosemary Monahan, Susan Beede, Joseph Costa and Bruce Rosinoff, CE Mar. 92, p56-59.

sinoff, CE Mar. 92, p36-39.

Begradation of Ground Water by Tetrachloroethylene, Wendy L. Cohen and Victor J. Izzo, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p63-68.

Poirot, James W. James W. Poirot, in Tight Race, Wins President-Elect Post in ASCE National Election, NE Sept. 92, p1.

Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Feb. 92, p91-105.

Finite Element Modeling of Concrete Expansion and Confinement, F. J. Vecchio, ST Sept. 92, p2390-2406.

Mechanical Characterization of the Soft Tissue in Horse Hooves, Harry A. Hogan and David M. Hood, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p147-150.

Numerical Simulation of a Sphere Moving Down an Incline with Identical Spheres Placed Equally Apart, Chi-Hai Ling, Chyan-Deng Jan, Cheng-lung Chen and Hsieh Wen Shen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767.

Probability of Crack Growth in Poisson Field of Penny Cracks, S. Mesarovic, D. Gasparini, S. Muju and M. McNelis, EM May 92, p961-978.

Military Secrets for Sale, CE May 92, p8.

The Crown and the Curtain Wall, Dudley G. McFar-quhar, CE Aug. 92, p62-65.

Policies

Policies
Implementation of the Department of Energy's New American Indian Policy within the Civilian Radioactive Waste Management Program, J. Bennett Easterling and Beth Berlin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p161-165.

Infrastructure Group Adds Up Pluses for Year, CE Sept.

92, p78.

Irrigation and Drainage—Systems Policy Analysis and India Case Study, Mahesh C. Chaturvedi, WR July/Aug. 92, p445-464.

MRS Site Requirements and Considerations and the Potential Influences of Specific Technology Selections, David F. Fenster, John A. Richardson and K. Michael Cline, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p204-211.

An Ounce of Prevention: How to Stay Legal, CC Oct. 92,

p11-12.
Prescriptive Model for Missouri River Reservoiroperation Analysis, David T. Ford, (Water Resources
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992, p55-5-60.

Regulatory Law and Policy to Support Space Mining, Bruce S. Marks and William R. Sharp, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,

1992), p2208-2219.

Reservoir Management and Thermal Power Generation, Barbara J. Lence, M. Imran Latheef and Donald H. Burn, WR July/Aug. 92, p388-405.

Roundtable Discussion Sessions, Thomas Wholley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p271-275.

Utilization of Waste Materials in Civil Engineering Con-struction, Hilary I. Inyang, ed. and Kenneth L. Berge-son, ed., 1992, 0-87262-907-4, 358pp.

p636-641

p030-041.
We Need to Integrate Water Transportation and Environmental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p403-406.

California's Recession Remedy, CE Sept. 92, p11. Construction under Fire, Ralph D. Ellis, Jr., CE Nov. 91,

Critical Issues for Engineering Managers, Delon Hamp-ton, ME July 92, p235-242.

Dialogue on Political Contributions and Engineering, William E. Norris, El Jan. 90, p38-41.

Infrastructure Plans Profilerate, Casey Dinges, CE Mar. 92, p114.

Massive Energy Bill Advances, Casey Dinges, CE Aug. 92,

San Francisco Bay Area's Experience Developing Trans-portation Control Measures for Air Quality Plans, Thomas Perardi, (*Transportation Planning and Air* Quality, Roger L. Wayson, ed., 1992), p56-63.

Water Management: Challenge and Opportunity, Warren Viessman, Jr., WR Mar./Apr. 90, p155-169.

Political parties
Pivotal 1992 Elections, Casey Dinges, CE Oct. 92, p112.

Application of Three-Dimensional Lagrangian Residual Transport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, HY June 92, p831-848.

Steven R. Abt, HY June 92, p831-848.

Assessing Culli) Speciation and Transport in the New York Bight, A. B. M. Badruzzaman and Wu-Seng Lung, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p476-488.

Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutants Entering the Back River Waste Water Treatment Plant, George G. Balog and Ralph O. Cullison, III., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p145-150.

A Coastal-Ocean Hindeast/Forecast Model. Pine Chen.

A Coastal-Ocean Hindeast/Forecast Model, Ping Chen, Yan-H. Zhang, Kwang-W. You and Lie-Yauw Gey, (Es-tuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p175-187.

412

Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, Hans J. Peterson and William R. Grout, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p516-522.

Effects of Soil Moisture and Physical-Chemical Properties of Organic Pollutants on Vapor-Phase Transport in the Vadose Zone, Say Kee Ong, Theresa B. Culver, Leonard W. Lion and Christine A. Shoemaker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179.

Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Kieli Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, 0-87262-861-2, 798pp.

Field Analysis of Contaminated Sediments by Immunoas-say, Deborah J. Mossman, Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, p110-

115. Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area, Jill C. Bicknell and Sachiko Itagaki, (Water Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p451-456.
Lagrangian Transport Simulation Using Video Images to Store and Retrieve Parameters, Poojitha D. Yapa and Jay B. Perry, (Estuarine and Coastal Modeling, Maicolm L. Spaulding, ed., Kei:h Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p13-25. berg, ed., Ral 1992), p13-25

1992), p13-25.

Mobilization and Removal of Contaminants Associated with Urban Dust and Dirt, Brian A. Dempsey, Yuan-Liang Tai and Stuart Harrison, (Environmental Engineering, Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p486-491.

Model for Pollutant Transport by Eddy Simulation, E. R. Holley, Y. C. Su, G. H. Ward and R. de Souza, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598.

Model for Transport of Floating Debris in the Ocean, Y. C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.

Modeling Transport and Fate of Micropollutants in

Modeling Transport and Fate of Micropollutants in Coastal Waters, Tjitte Nauta, Hans van Pagee and Mindert de Vries, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p304-316.

ed., 1992), p304-316.

NCASI Experiments Related to Validation of Sediment-Water Column Exchange Models for Hydrophobic Chemicals, Steven W. Hinton and Ray C. Whittemore, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p387-389.

A Novel Tracer Injector for Surface Water Studies, Cynthia J. Baker and Deborah J. Mossman, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p410-415.

NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, Paul Makowaki and John G. Garland, Ill., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p797-802.

8012.
Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p418-429.

Cheng, ed. and Craig Swanson, ed., 1972), p418-427.

A PC Modelling System for the Simulation of Transport and Fate of Solutes and Suspended Substances, Achristina Ellegaard, Iseper Weiergang and Helmer M. Petersen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),

A PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Eoin Howlett and Daniel L. Mendeisohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500.

berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500.

Planning, Assessing and Implementing Pipeline Rehabilitation Options, B. Jay Schrock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741.

Pollutant Transport Modelling in Large River Plumes, J. A. Stronach, C. R. Murthy and T. S. Murty, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p759-770.

Pollution Control Under the NPDES Stormwater Program, Thomas S. George and June Barrett-McDaniels, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645.

Prediction of Sedimentgraph from a Small Watershed in Poland in a Changing Environment, K. Banasik and D. E. Woodward, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p493-498.

Recovery of Metals from Water Using Ion Exchange, Thomas A. Hickey and David K. Stevens, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515.

A Stochastic Water Quality Model for Urban Watersheds, D. E. Barthé, J. F. Cruise and X. Mo. (Hudraulic Event).

1992), p510-515.
A Stochastic Water Quality Model for Urban Watersheds, D. E. Barbé, J. F. Cruise and X. Mo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p791-796.
Storm Runoff Detention for Pollutant Removal, A. Osman Akan, EE May/June 92, p380-389.

Osman Akan, EE May/June 92, p380-389.

Three-Dimensional Eulerian-Lagrangian Transport Model, A. K. M. Quamrul Ahsan and M. S. Bruno, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p1-12.

A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

USGS Utban Stormwater Investigations in the Dallas-

BROWNIN, ed., 1992, p.994-499.
USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, R. Brad Jennings, Tim H. Raines and Lucia G. Colangione, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p56-61.

Water Quality and Hydrologic Characteristics of a Wet Detention Pond, Betty Rushton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p878-883.

Wellfield Protection Program in Broward County, Flori-da, Robert C. Shair, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p69-74.

### Pollution

Distant Look at Pollution, CE May 92, p13-14.

Longitudinal Dispersion Coefficients in Estuary, I. Guy-mer and J. R. West, HY May 92, p718-734.

Passive Dispersive Transport Modelling: Comparison with Experimental Rhodamine Data in the Elbe Estuwith Experimental Ruddamine Data in the Edge Early, Germany, Joachim Krohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p127-139.

Regulators: Don't Overlook Public Interest (ltr), Stephen D. Hill, CE Sept. 92, p37.

Storm-Water Detention Storage Design under Random Pollutant Loading, Rafael Segarra-García and Vasude-van G. Loganathan, WR Sept./Oct. 92, p475-491.

The Transport and Fate of Drilling Muds, M. Kathryn Pickens and Wilbert J. Lick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p202-214.

Water, Endangered Ecosystem: Assessment of Chemica Pollution, Werner Stumm, EE July/Aug. 92, p466-476.

Pollution abatement
CSO Abatement for Gloucester Harbor in Massachusetts,
Jon R. Pearson, Donald J. Chelton and Michael P. Collins, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p1240-1241.
Electrokinetic Cleanups, Yalcin R. Acar, CE Oct. 92,

p58-60

p38-60. Extended Management Modeling Framework for Optimal Reliability-Based Design with Sampling Decisions, James Uber, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p532-536. Modeling of Soil Venting Processes to Remediate Unsaturated Soils, Suresh Lingineni and Vijay K. Dhir, EE Jan./Feb. 92, p135-152.

Pollution control

Clean Fuels to Clean Up?, CE July 92, p11.
Clean Fuels to Clean Up?, CE July 92, p11.
Connecticut's Wellhead Protection Program, Fred S.
Banach, (Irrigation and Drainage: Saving a Threatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), p92-97.

1992, p92-97.
Contaminant Groundwater Interception—RMA, S. Paul Miller and William L. Murphy, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p1171-1176.
Controlling Nitrogen in Coastal Waters, Rosemary Monahan, Susan Beede, Joseph Costa and Bruce Rosinoff, CE Mar. 92, p56-59.

sinoff, C.E. Mar. 92, p36-39.
Development of a Comprehensive Modeling System for Remediation of Contaminated Groundwater, Jeffery P. Holland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1178-1183.

Environmental Engineering Options for Managing Con-taminted Sediment, Norman R. Francingues, Jr. and Daniel E. Averett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p994-999.

Jennings, ed. and Nain G. Bhowmik, ed., 1992), p994999.
Integrated Remediation of Soil and Groundwater, Russell
S. Dykes and Arlin C. Howles, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Lianaweaver, ed., 1992), p244-249.
Liberty Reservoir Stormwater Retrofit Project, George G.
Balog, William P. Stack, Kenneth T. Belt and Prakash
Mistry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p346-351.
Oklahoma's Ground Water Protection Strategy, Michael
D. Smolen and Patricia E. Norris, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p98-103.
Partitioning Phosphorus Loads: Implications for Lake
Restoration, Thomas M. Heidlick and Martin T. Auer,
WR Sept./Oct. 92, p562-579.
Sensitivity of Non-Point Source Pollution Controls to
Land Use, Oner Yucel and David W. Blaha, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed.,
1992), p338-363.
Using Seals to Control Flow at Yucca Mountain, John A.
Blist Dens Stucker and Prassanna Kumar, (High Lead)

Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1196-1199.

[6] Folia Protection Program in Broward County, Florida, Robert C. Shair, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p69-74.

Polycrystalline Necking of Creep-Cavitating Bars, C. H. Lu and A. J. Levy, EM Apr. 92, p746-762.
Numerical Integration of Transient Creep Constitutive Equations for Polycrystalline Ice, S. Shyam Sunder, Alex A. Elvin and S. Nanthikesan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p429-432.

Polyethylene

Permeation of Organic Chemicals Through HDPE Geomembranes, Joni P. Saki, Jae K. Park and John A. Hoopes, [Environmental Engineering: Saving a Threat-end Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p201-207.

Polyolefin Plastic Water Service Line Performance, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p585-597.

Polygons
Local and Interaction Buckling of Polygonal Section Steel
Columns, Yasuhiro Migita, Tetsuhiko Aoki and
Yuhshi Fukumoto, ST Oct. 92, p2659-2676.

Polymer concretes Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Compressive Strength and Characterization of Failure Modes for Polymer Concrete, S. Mebarkia and C. Vipulanandan, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p988-991.

Conference Promotes Polymer Concrete Rehab, CE May 92, p21-22.

92, p.21-22.

Evaluating Polymer Concrete Bridge Expansion Joints
Using Acoustic Emission, M. J. Woodard and S. S.
Kuo, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), p409-412.

Properties of Composites Using Recycled Plastics, Karim
S. Rebeiz, David W. Fowler and Donald R. Paul, (Materials: Performance and Prevention of Deficiencies and
Failures, Thomas D. White, ed., 1992), p373-381.

Utilization of Waste Sulfur in Construction Materials and
as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, William C. McBee,
Frank E. Ward, William T. Dohner and Harold Weber,
(Utilization of Waste Materials in Civil Engineering
Construction, Hilary I. Inyang, ed. and Kenneth L.
Bergeson, ed., 1992), p116-127.

Polymers
Application of EPS for Slide Correction, Shan-Tai Yeh
and John B. Gilmore, (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p1444-1456.

Chemical Based Cement Grout System for Rock Grout-ing, A. V. Shroff and D. L. Shah, Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p651-

Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Feb. 92, p91-105.

Evaluation of Partial Depth Spall Repair Materials and Procedures, Arti J. Patel, David G. Peshkin and A. Russell Romine, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759.

Experimental and Theoretical Study of Flexural Behavior of Polymer Fiber Reinforced, Cement-Treated Soils, Robert Liang, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1080-1091.

Flow Dynamics in an End-to-End Vascular Graft Junction, Y. H. Kim and K. B. Chandran, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p964-967.

Interface Friction of Polypropylene Straps, Meijiu Wei

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p964-967.

Interface Friction of Polypropylene Straps, Meijiu Wei and Abdelmalek Bouazza, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1175-1187.

Mars Containers: Dust on Teflon Sealing Surfaces, H. V. Lauer, Jr. and J. H. Allton, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p508-517.

Metallized Microballoon EMI Shielding Materials, Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.

Mitigation of Dust Contamination During EVA Operations on the Moon and Mars, Peter E. Glaser, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1512-1522.

NonPolar Organics Toxicity in a Municipal Effluent, Carlos H. Victoria-Rueda, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p549-554.

Novel Photoelastic Approach in Analysis of Elliptical Holes in Thick Plates, Sameh S. Issa and G. A. Maamoun, EM Aug, 92, p1631-1645.

Overlays on Deck, Paul Tarricone, CE Sept. 92, p42-45.

Properties of Composites Using Recycled Plastics, Karim S. Rebeiz, David W. Fowler and Donald R. Paul, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381.

Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.

Remaining Technical Barriers to Obtain General Accep-tance of Geosynthetics, Robert M. Koerner, Yick Hsuan and Arthur E. Lord, Jr., (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p63-109.

Removing Selenium(IV) and Arsenic(V) Oxyanions with Tailored Chelating Polymers, Anuradha Ramana and Arup K. Sengupta, EE Sept./Oct. 92, p755-775.

Space Habitat Contaminent Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 370-1378.

Polynomials

Design of a Threshold Channel, Gregorio Vigilar, Jr. and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p729-

Equivalent Statistical Quadratization of Nonlinear Hy-drodynamic Loads on TLPs, Ahsan Kareem and Yousun Li, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p890-905.

Estimating Pit-Excavation Volume Using Cubic Spline Volume Formula, Chun-Sung Chen and Hung-Cheng

Lin, SU May 91, p51-66.

Macromodeling of Complex Composites, P. K. Basu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1071-1074.

Polynomial Chaos for Nonlinear Random Vibration, R. Ghanem and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p404-407.

Response of Plates of Arbitrary Shape Subject to Static Loading, K. M. Liew, EM Sept. 92, p1783-1794.

Spline Interpolations for Water Hammer Analysis, I. A. Sibetheros, E. R. Holley and J. M. Branski, HY Oct. 91, p1332-1351.

Polyolefin

Polyolefin Plastic Water Service Line Performance, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p585-597.

Backfill-Stiffened Foundation Wall Construction, Robert Nicholls, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p286-295.

Polyurethane

Concrete Surface Treatments—A Selection Guide, P. James Bruner, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482.

Constitutive Modeling and Simulation of Energy Absorbing Polyurethane Foam Under Impact Loading, James A. Sherwood and Colin C. Frost, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158.

Evaluation of Partial Depth Spall Repair Materials and Procedures, Arti J. Patel, David G. Peshkin and A. Russell Romine, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759.

Forensic Analysis of a Two-Component Joint Sealant Using FTIR-ATR, Laurand H. Lewandowski, Larry N. Lynch and Rogers Graham, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p53-65.

Mechanical Response of Cellular Materials Used in Waste Shipping Containers, A. K. Maji, S. Donald and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p308-

Rate-Dependent Plasticity Representation for Energy-Absorbing Materials, Q. H. Zuo, A. K. Maji, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p151-154.

Triple Coat Protects Marine Bridge Beams, CE Sept. 92, p94.

Polyvinyl chloride

Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p272-290.

Construction of Urugua-I RCC Dam, Juan Buchas and Fotio Buchas, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1902). 328, 321. 1992), p258-271.

Horton Infiltration Equation Revisited, A. Osman Akan, IR Sept./Oct. 92, p828-830.

Design and Operation of On-Farm Irrigation Ponds, Bri-jesh Kumar Mehta and Akira Goto, IR Sept./Oct. 92, p659-673.

Efficient Sizing of Storm Water Treatment Ponds, Thomas R. Sear and Brenda van Ravenswaay, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

SOA: Large Strain Consolidation Predictions, F. Townsend and M. C. McVay, GT Feb. 90, p222-243.

Water Quality and Hydrologic Characteristics of a Wet Detention Pond, Betty Rushton, Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p878-883.

Modeling Low-Flow Mixing through Pools and Riffles, Il Won Seo and W. Hall C. Maxwell, HY Oct. 92, p1406-

Swimming Pools Supported by Dissimilar Bearing Strata, G. S. Kovacs, CF May 92, p118-120.

Population statistics

Comprehensive Regional Socioeconomic Simulation Sys-tem, Gwan Kim, Pyong Sik Pak and Yutaka Suzuki, UP Sept. 92, p81-96.

Estimating Functional Population for Facility Planning, Arthur C. Nelson and James C. Nicholas, UP June 92,

Technical Personnel Shortages in Construction Industry, Russel C. Jones, El Jan. 90, p16-26.

Density Changes During Undrained Loading— Membrane Compliance, Mark D. Evans, GT Dec. 92, p1924-1936.

Effect of Lateral Stress on CPT Penetration Pore Pressures, J. P. Sully and R. G. Campanella, GT July 91, p1082-1088.

Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports '92, David Torseth, ed., 1992), p376-389.

Mechanism of a Landslide Caused by Rainfall, Masami Fukuoka, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p342-357.

Membrane Compliance and Liquefaction of Sluiced Gravel Specimens, Mark D. Evans, H. Bolton Seed and Raymond B. Seed, GT June 92, p856-872.

Stability Analysis of a Municipal Solid Waste Landfill, Jonathan D. Howland and Arvid O. Landva, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1216-1231.

pt210-1231. Stability Analysis of an Earth Slope, T. William Lambe and Francisco Silva-Tulla, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p27-69.

A Study of Slope Stability Analysis, R. J. Deschamps and G. A. Leonards, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p267-291.

Undrained Analysis of Slopes Based on Effective Stress Methods, John F. Peters, Chris L. Saucier and Oswald Rendon-Herrero, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p493-505.

Slope Displacement from Pile Driving, Richard E. Riker, Donald G. Anderson and D. Dexter Bacon, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p292-309.

Pore size distribution

Pore size distribution

Preferred Orientation of Pore Structure in Cement-Grouted Sand, Maan Helal and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p526-540.

Variations of Hydrological Parameters of Tuff and Soil, J. S. Y. Wang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p727-731.

Critical Reappraisal of Colloidal Activity of Clays, N. S. Pandian and T. S. Nagaraj, GT Feb. 90, p285-296.

Pore water pressure
Earthflow Evaluation and Control: A Case History, Michael R. Thomas and Alan L. Kropp, (Stability and Performance of Slopes and Embankments II, Raymond B.
Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864.

Secu, et. and Ross W. Boulanger, ed., 1992), p850-864. FE Analysis of Time-Dependent Instability of Cut Slopes in Clay Shale, Nobuyuki Yoshida and Toshihisa Adachi, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p429-444.

Modeling Anisotropy of Clays at Critical State, S. The-vanayagam and J.-L. Chameau, EM Apr. 92, p786-806. Piezometers in Earth Dam Impervious Sections (Paper introduced by R. W. Beene and Clifford LeRoy McAnear), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p324-365.

Pile Driving: Can it Cause Slope Movement? D. G. Anderson, R. E. Riker and B. P. Erickson, (Ports '92, David Torseth, ed., 1992), p350-363.

Probabilistic Analysis of Groundwater Levels in Hillside Slopes, Lakshmi N. Reddi and Tien H. Wu, GT June 91, p872-890.

Slope Displacement from Pile Driving, Richard E. Riker, Donald G. Anderson and D. Dexter Bacon, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992).

Wave-Induced Effective Stress in Seabed and Its Momen-tary Liquefaction, Tetsuo Sakai, Katsuya Hatanaka and Hajime Mase, WW Mar./Apr. 92, p202-206.

Porosity
Characterization of the Topopah Spring and Tiva Canyon
Tuffs at Yucca Mountain, Ajeet Singh, Shamsuddin
Ilias and Gary Tatterson, High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1953-1958.
Comparison of Two Conceptual Models of Flow Using
the TSA, Michael L. Wilson, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p882-890.
Prawdown Solutions with Variable Drainable Programs
Committee, 1992, p882-890.

Drawdown Solutions with Variable Drainable Porosity, Ravi S. Pandey, Ashim K. Bhattacharya, Om P. Singh and Suresh K. Gupta, IR May/June 92, p382-396.

Dynamics of Saturated Rocks. IV: Column and Borehole Problems, Irene Vgenopoulou and Dimitri E. Beskos, EM Sept. 92, p1795-1813.

Factors Controlling Properties and Durability of Concretionary Laterite Gravel Aggregates, Enuvie G. Akpokodje and Peter P. Hudec, MT Feb. 92, p58-70.

Flow-Deformation Response of Dual-Porosity Media, Derek Elsworth and Mao Bai, GT Jan. 92, p107-124. Micromechanical Model to Predict Sand Densification by Cyclic Straining, Ricardo Dobry and Emmanuel Petrakis, EM Feb. 90, p288-308.

Reflection and Transmission of Water Wave by Porous Breakwater, L. H. Huang and H. I. Chao, WW Sept./ Oct. 92, p437-452.

Semi-Analytical Treatment of Fracture/Matrix Flow in a Dual-Porosity Simulator for Unsaturated Fractured Rock Masses, R. W. Zimmerman and G. S. Bodvarsson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p272-278.

Simulation of Runoff and Infiltration of Disturbed Land, Ben Chie Yen and Robert Riggins, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p401-406.

Stress Transfer Within Granular Geomaterials, Gabriel Auvinet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p159-162.

and John M. Nicuzweck, ed., 1992, p.139-102.
Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, Paul G. Ka-plan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1643-1646.

Porous materials
Influence of Seafloor on Acoustic Plane Wave, L. H. Huang, EM Oct. 92, p1987-2004.

Chloride Binding Capacity in Cement-Fly-Ash Pastes, O. A. Kayyali and M. Sh. Qasrawi, MT Feb. 92, p16-26.

Critical Issues Related to a Combined Probabilistic Nu-Critical issues Related to a Combined Probabilistic Ni-merical Analysis of Contaminant Transport in Porous Media, Jeffrey D. Cawlfield and Ming-Chee Wu, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p232-235. Flexible Porous Breakwater, Keh-Han Wang and Xugui Ren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p224-227.

Flow-Deformation Response of Dual-Porosity Media, Derek Elsworth and Mao Bai, GT Jan. 92, p107-124.

Perdictions of Thermal Characteristics for Mixed Porous Media, Yueying Deng, Clifford B. Fedler and James M. Gregory, MT May 92, p185-195.

Water Wave Generated by a Porous Wavemaker, L. H. Huang, P. C. Hsieh and G. Z. Chang, (Engineering Mechanics, Loren D. Lutes, ed., and John M. Niedzwecki, ed., 1992), p336-340.

Porous media flow

Accounting for Uncertainty in Natural Systems, Milton E. Harr, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p1612-1616.

Wetted-Region Structure in Horizontal Unsaturated Fractures: Water Entry Through the Surrounding Porous Matrix, R. J. Glass and D. L. Norton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p717-726.

Portland cements

Portland cements
Concreting at Subfreezing Temperatures, Charles J.
Korhonen, Edel R. Cortez and Brian A. Charest, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p582-397.
Evaluation of Partial Depth Spall Repair Materials and Procedures, Arti J. Patel, David G. Peshkin and A. Russell Romine, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759.
Either Sunpressed Localization in Tension B. Meharber.

Fiber Suppressed Localization in Tension, B. Mobasher and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-

prensic Analysis of a Two-Component Joint Sealant Using FTIR-ATR, Laurand H. Lewandowski, Larry N. Lynch and Rogers Graham, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p53-65.

Methods to Estimate Composition of Jet Grout Bodies, L. Joseph Kauschinger, Rachid Hankour and E. B. Perry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p194-205.

Micromechanics-Based Constitutive Model for Interface Shear, M. P. Divakar and A. Fafitis, EM July 92, p1317-1337.

Resolving Environmental Concerns: Ash Beneficial Re-use, Richard W. Goodwin, Utilization of Waste Mate-rials in Civil Engineering Construction, Hilary I. In-yang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31.

Review and Evaluation of the Use of Microsilica as an Admixture in Concrete, Brett Gunnink and Fahad Alnowaiser, (Ulilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p92-103.

The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.

Ports
Alameda Transportation Corridor, Arthur B. Goodwin, (Ports '92, David Torseth, ed., 1992), p94-107.
A Competitive Framework for Evaluating the Economic Benefits of Port Improvements, Ira Hirschman and Ogden Beeman, (Ports '92, David Torseth, ed., 1992), p563-576.
A Comprehensive Approach to Container Terminal Planning: Striking a Balance, William D. Friedman, (Ports '92, David Torseth, ed., 1992), p24-2.
Conflict of Interest in Deep-Draft Anchorage Usage—Application of QT, Jan A. Berg-Andreassen and Adam K. Prokopowicz, WW Jan./Feb. 92, p75-86.
Crane Raise with Zero Downtime, William L. Casper and Alex Surko, (Ports '92, David Torseth, ed., 1992), p749-736.
Creating Wetlands. Laurence J. Purcell and Thomas D.

Creating Wetlands, Laurence J. Purcell and Thomas D. Johnson, CE Aug. 92, p36-37.
Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992), p548-562

p548-562.

Durability Failure of a Concrete Block Port Pavement, Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p1-15.

Environmental Monitoring and Operator Guidance System (EMOGS) for Shallow Water Ports, Andrew L. Silver, (Ports '92, David Torseth, ed., 1992), p535-547.

Evaluation of Proposed Port Facilities, Charleston Harbor, South Carolina, Samuel B. Heltzel, (Ports '92, David Torseth, ed., 1992), p791-801.

Evolving Mitigation Requirements for Port Development, William K. Fehring, Mark Easley and David C. Carpenter, (Ports '92, David Torseth, ed., 1992), p203-213.

Experimental Studies for the Port of Bilbao Extension, José R. Iribarren and María J. Martín, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p149-157.

Gate Maritime Wharf and Intermodal Facility Viswanath K. Kumar, William L. Allen and Thomas Mantia, (Ports '92, David Torseth, ed., 1992), p43-57. Facility

Land Reclamation Design for the Port of Los Angel 2020 Plan, J. Warwar and R. Wittkop, (Ports '9 David Torseth, ed., 1992), p577-590.

David Iorseta, ed., 1992), p.377-390.
Many Engineering Issues and Challenges Met in Development of Hong Kong, C. K. Chow, El Jan. 92, p60-70.
Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports '92, David Torseth, ed., 1992), p376-389.

cu., 1972), p.3 (9-36).
Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodriguez, Maria C. Arbelaez, Takenori Satoh and Edward Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992), p.390-402.

Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.

Pile Lateral Load Test in the Port of Los Angeles, Mat-thew F. Hunter, Allen M. Yourman, Gerald M. Diaz and Hsueh-Hsin Chu, (*Ports '92*, David Torseth, ed., 1992), p322-335.

Planning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klanenik), (Ports '92, David Torseth, ed., 1992), p937-938.

Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.

Planning Operations of Bulk Loading Terminals by Simulation, Lal C. Wadhwa, WW May/June 92, p300-315.

Port of Ningbo Master Plan, Bruno Garunkstis, (Ports '92, David Torseth, ed., 1992), p72-84.

Port of Portland's Berth 601 Floating Dock, Elmer W. Ozolin and Walter R. Haynes, (Ports '92, David Torseth, ed., 1992), p150-163.
Ports '92, 2 vols., David Torseth, ed., 1992, 0-87262-874-4, 1212pp.
Recycled Materials for Port Construction, David S. Miller, (Ports '92, David Torseth, ed., 1992), p815-825.

Risky Business: Can We Believe Port Risk Assessments? John R. Harrald, Thomas A. Mazzuchi and Christo-pher M. Stone, (Ports '92, David Torseth, ed., 1992), p657-669.

Seismic Guidelines Impact Los Angeles Wharf Design, CE June 92, p28.

Ship-Berth Link as Bulk Queueing System in Ports, Zoran R. Radmilovich, WW Sept./Oct. 92, p474-495.

Signing Systems: Directional, Identity, and Graphic Systems for the Port of Long Beach, Mackey W. Deasy, Wayne Hunt and Louis Rubenstein, (*Ports* '92, David Torseth, ed., 1992), p85-93.

Soil Contamination Issues at Port Marine Terminals, Donald W. Rice, (Ports '92, David Torseth, ed., 1992).

p288-300.

Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chilcote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p1-14.

Underground Refrigeration Outlets, Clay Waseen, (Ports '92, David Torseth, ed., 1992), p682-694.
Upgrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alexander Surko, Jr., (Ports '92, David Torseth, ed., 1992), p802-814.

U.S. Navy Deployable Waterfront Facility, Glenwood Bretz, Julio Giannotti and Arturo Calisto, (Ports '92, David Torseth, ed., 1992), p520-534.

Use of Portable Simulator in Designing Channel Improvements for Port of Brownsville, Texas, Dennis Wayne Webb and Larry Leon Daggett, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614.

acuum Alumina Unloader for Port of Everett, Curtis O. Hecla, (Ports '92, David Torseth, ed., 1992), p143-149.

Reservoir Water Quality Modeling in Northern Portu-gal—Some Case Studies, A. C. Rodrigues and G. T. Orlob, (Water Resources Planning and Management: Sar-ing a Threatened Resource—In Search of Solutions, Mohammad Karamour, ed., 1922), p804–809.

Integrated GPS-INS for High-Accuracy Road Positioning, M. E. Cannon, SU Nov. 92, p103-117.

Laptop Automated Navigation Aid Positioning System with Differential GPS, Charles F. Klingler, Michael R. Wroblewski and Scott Krammes, SU Nov. 92, p130-

Two Examples of Position Estimation, Gary Shaffer and Ben Motazed, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

Anchors in the Desert, Donald A. Bruce, William Fiedler and Ronald Triplett, CE Dec. 91, p40-43.

Bridge Construction Goes Gently Down the River, CE Nov. 92, p23-26.

ables Support Skylight Roof at Morgan Library, CE Jan. 92, p18-19.

Masonry as a Structural Material, Daniel P. Abrams, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p116-129. Post-tensioned Cables Have Stabilized Before (Itr), Robert A. Fischman, CE July 92, p32. Probabilistic Analysis, of Post-Tensioned State Circles

Probabilistic Analysis of Post-Tensioned Steel Girder Bridges, Sami W. Tabsh and Jack R. Kayser, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p13-16.

Postbuckling behavior

Postbucking Behavior of Stiffened Composite Shell Panels, S. Sridharan, A. Kasagi and M. Zeggane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p648-651.

Postbuckling of Polar Orthotropic Circular Plates—Retrospective, Archibald N. Sherbourne and Mahesh D. Pandey, EM Oct. 92, p2087-2103.

Postbuckling Response Simulations of Laminated Aniso-tropic Panels, Ahmed K. Noor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Reliability Analysis of Plates with Initial Deflection by Entropy Model, Miyamura Atsunori, Kohama Yoshiro and Takada Toyofumi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p559-562.

Variational Solutions of the Von Karman Plate Theory Based on a Mixed Formulation, Wan-Lee Yin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p656-659.

Army Water Supply Management System for Installa-tions Drinking Water Facilities, Hany H. Zaghloul, Fadi A. Karaa, Jocelyn Clark and Matthew Korfist, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p145-152.

City of San Diego—Study of Potable Reuse of Reclaimed Wastewater: Final Results, Ken Thompson, Adam W. Olivieri, Don Eisenberg, Robert C. Cooper, Richard E. Danielson and Lori Pettigrew, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138.

Critical Public Issues for Well Head Protection, Daniel J. Van Abs. (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p274-279.

Design and Maintenance of Rural Water Supply Systems for Improved Performance, Paul D. Robillard and Ronald L. Droste, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p523-528.

Determining Causes for Taste and Odor in Bandar Ab-bas's Drinking Water, Mahmoud Asadi and A. R. Mes-daghinia, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p610-616.

Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.

Extraction of Potable Water from Urine for Space Appli-cations, Peter J. Holland, Donald M. Bird and Carolyn L. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-1689.

Nutrient Removal for Two Industrial Recycling Projects, Richard Sykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p382-387.

Pilot Study to Meet Drinking Water Regulations, Linda Rae Leong, Patti P. Craddock and Carol Ruth James, [Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509.

Properties of Solidified/Stabilized Chromium Contami-nated Soil, Beth C. Fleming and M. John Cullinane, Jr., (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1204-1209.

Removal of Enternelly Low Levels of Munitions in a Drinking Water Supply, R. Mark Bricka and Wayne Sharp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1190-1196.

Removal of Trihalomethane Precursors by Ferric Chloride Coagulation, Anne Studstill and Appiah Amirtharajah, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p526-531.

Space Station & Lunar/Mars Life Support Research, Win-ston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 690-1700.

Use of Contaminant Mobility and Transport Parameters to Determine Water Testing Protocol, Paul D. Robillard and Perry B. Kubek, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p831-836.

VOC-Contaminated Water Cleanup Incentive Program, Dan L. Glasgow and Richard A. Rhone, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.214-219.

Wellfield Protection Program in Broward County, Flori-da, Robert C. Shair, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p69-74.

## otential flow

Dynamic Response of an Infinite Beam Supported by a Fluid, Z. G. Zhao and J. P. Dempsey, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p341-344.

ed., 1992), p341-344.
Nonlinear Shoaling and Impact of Waves on Coastal Structures, S. T. Grilli, M. A. Losada, F. Martin and I. A. Svendsen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82.
Potential Flow Solution for Ground Water Mounding, Tswn-Syau Tsay, John Hoopes, Craig Fergusson and Salwa Rashad, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p790.

Power
Modern Crane Control Enhancements, Jeffrey T. Hubbell, Bruce Koch and Dennis McCormick, (Ports '92,
David Torseth, ed., 1992), p757-767.
Power Flow and Energy in Primary-Secondary Systems,
G. Chen and T. T. Soong, EM May 92, p1046-1051.

Predicting Vertical Acceleration in Vehicles Through Road Roughness, Jorge A. Marcondes, Mark B. Snyder and S. Paul Singh, TE Jan./Feb. 92, p33-49.

Power supplies

Extended Experience with a Short-Term Hydropower Scheduling Model in New England, Paul H. Kirshen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.299-304.

mao Karamouz, ed., 1992, p.299-304. Integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, B. A. Miller, V. Alavian, M. D. Bender, D. J. Benton, P. Ostrowski, Jr., J. A. Parsly and M. C. Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p563-568.

Bhowmik, ed., 1992), p563-568.
Lifeline Earthquake Engineering in the Central and Eastern U.S., Technical Council on Lifeline Earthquake Engineering Monograph No. 5, Donald B. Ballantyne, ed., 1992, 0-8726-902-3, 200pp.

A Mars I Watt Vortex Wind Energy Machine, Michael Ralston, Christopher Crowley, Ronald Thomson and Owen Gwynne, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-797.

Power Sources for Lunar Bases, Alastair J. W. Mayer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p763-773.

Powerplants
3-D Modelling of Heat Discharge from Ul-Jin Power Plant into Coastal Waters of Korea East Sea, Young Jae Ro, Tae In Kim, Ha Keun Sung and Suk Woo Lee, (Estatrine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Bumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p501-512.

Cheng, ed. and Craig Swanson, ed., 1992), p501-512. Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p605-610.

Cofferdam Construction Speeds Powerplant Rehab, CE Mar. 92, p14.

Design Guidelines for a Sedimentation Control System at Open Channel Diversions, Vincent S. Neary and A. Jacob Odgaard, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p198-302

Economics of Ocean Thermal Energy Conversion (OTEC), Luis A. Vega, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p152-

Economics of Wave Power, George Hagerman, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p213-257.
Evaluation Method for Advanced Acid Rain Compliance Technology, H. Christopher Frey and Edward S. Rubin, Ey Apr. 92, p38-55.
Municipal Wastewater for Power Plant Cooling Water. Impacts on a Flow-Limited River, Mark Gerath, Fred Sellars, Monique Villars and Lisa Wolf, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), Novel Combined-Cycle Low-Temperature Engineer-

Novel Combined-Cycle Low-Temperature Engine Sys-tem, Joel H. Rosenblatt, EY Dec. 92, p209-223. The OCEA Awards of Merit, Teresa Austin, CE July 92,

p50-53.

pob-33.

Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p164-169.

State of the Art in Open-Cycle Ocean Thermal Energy Conversion, Michel Gauthier, Jean Marvaldi and Federica Zanganado, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p109-151.

Thermal Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604.

Assessing the Leaching Potential of Herbicides at the Ohio MSEA, S. R. Workman, A. D. Ward and W. G. Knisel, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., Resource—In Se 1992), p413-418.

1992), p413-418.
Deformation of Fill Slopes Caused by Wetting, Iraj Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257.
Effect of Collector Dosage on Metal Removal by Precipitation/Flotation, Venbakm C. Gopalratnam, Gary F. Bennett and Robert W. Peters, EE Nov/Dec. 92, p923-948.

Bennett and Robert W. Peters, EE Nov/Dec. 92, p923-948.

Estimating Peak Flows from Small Agricultural Watersheds, James V. Bonta and A. Ramachandra Rao, IR Jan./Feb. 92, p122-137.

ETBC: Interactive Software for Blaney-Criddle Estimates of Evapotranspiration, Ronald L. Elliott, Eldon L. Johns and Paul A. Weghorst, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p134-139.

Mechanism of a Landslide Caused by Rainfall, Masami Fukuoka, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p342-357.

Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monsoon Climate of Tamil Nadu, India, Charles Rodgers and Mark Svendsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347.

The Present Status of Precipitation Enhancement by Cloud Seeding, Roelof T. Bruintjes, T. L. Clark and W. D. Halli, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p612-617.

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Models in Weather Transition Pages.

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, T. L. Clark, R. T. Bruintjes and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p806-611.

Precipitation, atmospheric 2, 1792-171.

Precipitation, atmospheric 2, 1702-171.

Precipitation, atmospheric 3, 1702-171.

BEST: New Satellite Mission Dedicated to Tropical System Energy Budget, M. Orgeret, AS Jan. 92, pl-11.

Probability and Climatology of Droughts in the Western United States, Hugo A. Loaiciga, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl19-129.

Revional Frequency Analysis Using L-Moments, J. R. M.

Regional Frequency Analysis Using L-Moments, J. R. M. Hosking and J. R. Wallis, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p13-18.

Stochastic Simulation of Climate Input for Water Supply Forecasting, Roy W. Koch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p557-562.

### Predictions

Analysis of Compressibility of Sensitive Soils, T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

Analytical Methods for the Determination of Correla-tions and Spectra of Nonlinear System Response, R-Valery Roy and Pol D. Spanos, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p412-415.

Application of Performance Assessment as a Tool for Guiding Project Work, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2126-2135.

Collapse Mode of Elastic-Plastic Structures, F. Giamban-co, T. Panzeca and M. Zito, EM June 92, p1083-1092.

Comparison of Dispersion Models for Wastewater Treat-ment Emissions, Jin-Sheng Lin and Lynn M. Hild-demann, [Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11.

Comparison of Numerical Modeling Approaches for Sub-surface Immiscible Contaminant Transport, Klaus Rathfelder and Linda M. Abriola, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed. 1992) 275-280. ed., 1992), p275-280.

Computer Modeling Analysis for Highway Steel Bridge Vibration, Ton-Lo Wang, Mohsen Shahawy and Dong-zhou Huang, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1922), p679-686.

Dynamic Compaction: Predicting Depth of Improvement, Vince Luongo, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p927-939.

Dynamic Plug Flow Reactor Network Model for Contam-inant Transport in Water Distribution Systems, James Uber, Ken Hickey, Mao Fang and Lew Rossman, (Hy-draulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p772-777.

Dynamic Response Analysis of Reinforced-Soil Retaining Wall, Muthucumarasamy Yogendrakumar, Richard J. Bathurst and W. D. Liam Finn, GT Aug. 92, p1158-

Entrainment of Bed Sediment Into Suspension, A Garcia and Gary Parker, HY Apr. 91, p414-435.

Environmental Impact Analysis of Coastal Projects, Jon T. Moore, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p952-957.

Experiences with Experimental Design Schemes for Fail-ure Surface Estimation and Reliability. S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p252-255.

Experimental Validation of a Probabilistic Fracture Mechanics Model, Mircea Grigoriu and A. R. Ingraffea, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p445-446.

Extremal Wave Statistics Using Three Hindcasts, Robert M. Wyland and Edward B. Thornton, WW Jan./Feb. 91, p60-74.

Failure Prediction of Anisotropic Material, Photios P. Papados and Paul N. Roschke, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1012-1015.

Fatigue Life Variability and Reliability Analysis of a Wind Turbine Blade, Paul S. Veers, Herbert J. Suther-land and Thomas D. Ashwill, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p424-427.

Fatigue Strength of Welded Joints Under Broadband Loadings, David P. Kihl, Shahram Sarkani and James A. Kuny, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p428-

Fault Stress Analysis for the Yucca Mountain Site Characterization Project, S. J. Bauer, M. P. Hardy, R. Goodrich and M. Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277.

Frogram Committee, 1992), p.2267-2277.
First-Passage Failure Predictions for Yielding Primary-Secondary Systems, David C. F. Chen and Loren D. Lutes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p564-567.
General Mechanism of Turbulence, Wenxiong Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.

Niedzwecki, ed., 1992), p397-400.

Granular Flow on a Bumpy Inclined Chute, Marijan Babić, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1024-1027.

Improved Thermal Predictions in CE-QUAL-W2, Raymond S. Chapman and Thomas M. Cole, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p158-163.

The Influence of Rectangular Pier Foundation on Local Scour, A. C. Parola, D. A. Schaefer, A. El-Khoury and B. M. Brown, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhowmik, ed., 1992), p132-137.

Low-Cycle Fatigue Prediction for Ramberg-Osgood Type Materials, Fasal H. Al-Sugair, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p432-435.

Micromechanics and Effective Properties of Elastic Par-

Micromechanics and Effective Properties of Elastic Par-ticulate Composites, J. W. Ju, (Engirecting Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p95-98.

A Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, Michael F. Sheridan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2033-2038.

Multivariable Analysis Using Isoparametric Finite Elements, Ping Wang and William K. Ruie, EM Aug. 92, p1730-1737.

Natural Landslides, George F. Sowers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p804-833.

Neural Network for Predicting Concrete Strength, Trefor P. Williams, Anil Khajuria and P. Balaguru, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodino, ed. and Jeff R. Wright, ed., 1992), p1082-1088.

Wright, ed., 1992), p1082-1088.

A Non-Gaussian Fatigue Model for Offshore Structures, Jin Wang and Loren D. Lutes, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p463-466.

A Numerical Model Simulation of Tidal Currents in Long Island and Block Island Sounds, L. Charles Sun, (Estrairine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, p513-524.

On the Bifurcation of Elasto-Plastic Crystals During Multiple Slip, Ronaldo I. Borja and Jon R. Wren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p284-287.

Overview of ORIGENS. and ORIGEN-S: Capabilities and

Overview of ORIGEN2 and ORIGEN-S: Capabilities and Limitations, C. V. Parks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p57-64.

Parameter Estimations of Structural Dynamic Systems C.-B. Yun, C.-G. Lee and H.-J. Lee, (Probabilistic Me chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p212-215.

Predicting Behavior of Cyclically Loaded RC Structures, William K. Rule and Robert E. Rowlands, ST Feb. 92,

Predicting Construction Contractor Failure prior to Con-tract Award, Jeffrey S. Russell and Edward J. Jaselskis, CO Dec. 92, p791-811.

CO Dec. 92, p791-811.
Predicting Effluent PCBs From Superfund Site Dredged Material, Edward L. Thackston and Michael R. Palerno, EE Sept./Oct. 92, p657-665.
Predicting Tower Guy Pretension Using a Neural Network, Raja R. A. Issa, Desmond Fletcher and Ruth Ann Cade, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1074-

Predicting Water Demand in Agricultural Regions Using Time Series Forecasts of Reference Crop Evapotranspiration, John C. Tracy, Miguel A. Mariño and S. Alireza Taghavi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p50-55.
Prediction Method for Local Scour by Warmed Cooling-Water Jets, S. Ushijima, T. Shimizu, A. Sasaki and Y. Takizawa, HY Aug. 92, p1164-1183.
Prediction of Geological and Mechanical Processes While

Prediction of Geological and Mechanical Processes While Disposing of High-Level Waste (HLW) Into the Earth Crust, O. L. Kedrovsky and V. N. Morozov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p759-762.

Prediction of Natural Channel Hydraulic Roughness, Sid-dig E. Ahmed and Mohammed B. Saad, IR July/Aug. 92, p632-639.

Pre-Envelope Covariance Differential Equations, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p180-

Probabilistic Order of Chaotic Dynamics, A. H.-D. Cheng, C. Y. Yang and K. Hackl, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.

chanles and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p420-423.

Reliable Design-Wave Force Predictions for Seabed Pipelines, Robert A. Grace, (Civil Engineering in the Oceans V. Robert I. Hudspeth, ed., 1992), p481-495.

Robust Approach to Wave Runup Calculation, Todd L. Walton, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p879-891.

The Role of ORIGEN-S in the Design of Burnup Credit Spent Fuel Casks, M. C. Brady, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p65-71.

The Role of Performance Assessment in Validation, Reg-ulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p99-101

mittee, 1992, 199-101.
SOA: Large Strain Consolidation Predictions, F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243.
Soil Nailing: A Simplified Kinematic Analysis, R. John Byrne, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p751-764.

Soil Suction-Potential Model, Abdulmohsin W. Dhowian, GT Apr. 92, p521-539.

GT Apr. 92, p521-539.

Some Remarks on BK-Models for Fatigue Crack Growth, M. M. Rocha and G. I. Schueller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p316-319.

A Statistical Method for the Reliability of Mechanical Components, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p440-442.

Streamflow Forecasting Using Trainable Neural Networks, Jason Smith and Robert N. Eli, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p56-61.

Taking Account of the Biosphere in HLW Assessment,

Karamouz, ed., 1992), p56-61.
Taking Account of the Biosphere in HLW Assessment, Graham M. Smith and Helen A. Grogan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2306-2312.
TBM Performance Prediction in Yucca Mountain Welded Tuff From Linear Cutter Tests, Richard Gertsch, Levent Ozdemir and Leslic Gertsch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1516-1520.
Testing and Cohra-SFS Analysis of the VSC-17 Ventilat-

resting and Cobra-SFS Analysis of the VSC-17 Ventilated Concrete, Spent Fuel Storage Cask, Mikal A. McKinnon and Richard C. Schmitt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

pro4-112. Validation Issues Associated with Performance Assessment Modeling Activities for High-Level Radioactive Waste Repositories, Thomas J. Nicholson, Charles F. Voss and Johan Andersson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1437-1441.

Waste Isolation Pilot Plant Robotic Investigation and Study, T. M. Schultheis and J. R. Walls, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p960-965. Wind Cross-Spectrum Effects on Long-Span Bridges, N. P. Jones, A. Jain and R. H. Scanlan, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p63-66.

refabricatio

Prefabrication
Engineering Pre-engineered Buildings, Alexander Newman, CE Sept. 92, p58-61.
Flow Capacity Effect on Vertical Drain Performance, R. Robert Goughnour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p993-1005.
The Future Role of Factory Built Housing, Fred C. Hallahan, Jr., (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p29-38.
Housing—Economic Standard, D. Eliakim, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p66-74.
Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Preliminary design
Preliminary Design of an Underground Lunar Mine,
Scott B. Berk and Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed. Stein Sture, ed. and Russell J. Miller, ed., 1992),

p117-1182.

Preloading
The Design of a Reclamation Scheme by Preloading, S. Ossama Mazen, (Grouting, Soil Improvement and Geoxynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1019-1030.

Site Improvement for a Steel Mill Complex, Eun C. Shin, Bang W. Shin and Braja M. Das, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-828.

Preservation Historic Bridge Program Gets Preservation Award, NE

Aug. 92, p5.

Kemp Cited for Preservation Work, NE Mar. 92, p5.

Taking the Lean Out of the Leaning Tower of Pisa?, CE Jan. 92, p12.

Fluctuating Uplift and Lining Design in Spillway Stilling Basins, Virgilio Fiorotto and Andrea Rinaldo, HY Apr. 92, p578-596.

Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

Leaks in Pipe Networks, Ranko S. Pudar and James A. Liggett, HY July 92, p1031-1046.

Pressure reduction Constant Hole-Spacing Trail Tubes, S. T. Chu and H. M. Bagherzadeh, IR Jan./Feb. 92, p166-178.

Pressure responses
Inflation Instability of Cylindrical Membranes, Baoqing
Yu, William A. Nash and Thomas J. Lardner, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), pp16-919.
Pressure Losses Across Sequential Stenoses in Collapsible
Tubing, Maria Siebes and Binu John, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,
ed. 1992), n832-835.

tubing, Fraire D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p832-835.
The Transverse Vortex in the Wall Regions of the Turbulent Boundary Layers in the Flows with Adverse Pressure Gradient, Q. X. Lian and T. C. Su, (Engineering Methanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p474-477.

Pressure vessela
ASME Pressure Vessel Code Application to Nuclear
Waste Container Design, Mohamed B. Trabia and
Mark Kiley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1244-1252.

Gorrosion Fatigue of Deepwater Offshore Materials, Gor-don F. Fowkes and Harris L. Marcus, (Civil Engineer-ing in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.

Evaluation of Performance of Two Piles Using Pressure-meter Method, Roger Frank, Nicholas Kalteziotis, Michel Bustamante, Stavros Christoulas and Haralam-bos Zervogiannis, GT May 91, p695-713.

Pressuremeter and MDD Moduli for Road Design, P. J. Sanders, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p367-381.

Buckle Propagation in Submarine Pipelines, G. D. Hahn, M. She and J. F. Carney, III., EM Nov. 92, p2191-2206. esign Implications of Measured Pressures and Strains in Silos, Geoffrey E. Blight, ST Oct. 92, p2729-2742.

Houston Intercontinental Airport Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloth, Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

Hydraulic Properties of a Fine-Grained Soil Under Vari-ous Capillary Pressures and Loadings, Aladdin Shaikh and John D. Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p648-653

653.

Influence of Liquid Length Variation in Hydraulic Transients, Enrique Cabrera, José Abreu, Rafael Pérez and Antonio Vela, HY Dec. 92, p1639-1650.

Interaction of Steep Waves with Vertical Walls, D. Sen, WW Sept./Oct. 92, p453-473.

www.sept.Joc., 22, po35-342.

Lunar Base Pressure, Op Fraction, and ExtraHabitat Activity Suit Design, George W. Morgenthaler, Edward G. Barrett, Dale A. Fester and Carolyn G. Cooley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 720-1727.

Effectiveness of Seismic Strengthening Techniques for Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1884-1902.

Experimental Bridge Faces Heavy Loads, CE June 92, p29-30.

Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Trian-tafillou, Nikolaos Plevris and Nikola Deskovic, (Mate-rials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717.

Parametric Study of Continuous Prestressed Composite Girders, Wenxia Tong and Hamid Saadatmanesh, ST Jan. 92, p186-206.

Predicting Tower Guy Pretension Using a Neural Net-work, Raja R. A. Issa, Desmond Fletcher and Ruth Ann Cade, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1074-1081 1081

Prestress Influence on Shear-Lag Effect in Continuous Box-Girder Bridge, Shih Toh Chang, ST Nov. 92,

p3113-3121.

Prestress Level in Stress-Laminated Timber Bridges, Edward F. Sarisley and Michael L. Accorsi, ST Nov. 90, p3003-3019.

restressed Composite Girders. I: Experimental Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2743-2762.

Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou and Nikola Deskovic, ST May 92, p1270-1284.

Strength and Behavior of Slender Steel Pipe under Pre-stressing Force, Zenon A. Zielinski and Hamid Mobasher-Fard, ST Oct. 92, p2911-2926.

Price Effects of Landfills on Residential Land Values, Arthur C. Nelson, John H. Genereux and Michelle Genereux, UP Dec. 92, p128-137.

Reclaimed Water, Irrigation, and Conservation Pricing, Ronald E. Young, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p161-162.

Pricing Armor Rock for Rubble Mound Breakwaters, R. A. Everist, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p160-169.
Pricing of Services, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1089-1094.
Using Price Adjustment Clauses to Reduce Risk Michael

Using Price Adjustment Clauses to Reduce Risk, Michael C. Loulakis and William L. Cregger, CE Sept. 92, p40.

Group Prioritization System for Army Military Construc-tion, Bruce C. Goettel, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p49-36.

Operation of the Tennessee Valley Authority Water Control System Under Extreme Drought Conditions, H. Morgan Goranflo, Jr., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-365.

Remediation Site Prioritization by the Risk Ranking and Filtering Method, James H. Lambert, Con Way Ling and Yacov Y. Haimes, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p311-321.

Szi. Risk Assessment or Engineering Standards: Toward a Decision Framework, Leonard Shabman, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p40-51.

Prisons
Modern Prisons Can Reduce Costs and Stress, CE Aug. 92, p14. Start-Ups, CE Sept. 92, p11.

Private sector

The Evolution of an Environmental Monitor, Peter J. Dodds and R. Scott Sternberger, CE June 92, p56-58. Promoting Private Irrigation Development: The Irrigation Sector Program Experience in Nepal, Richard Reidinger and Upendra Gautam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p221-226.

Privatization

Infrastructure Privatization Accelerates, CE Mar. 92, p18,20

Privatization on The Rise, CE May 92, p8.

Probabilistic methods

Analysis of Uncertainty in Geotechnical Site Investiga-tions, and Why, Milton E. Harr, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste M p755-758.

Bidding Strategy: Winning over Key Competitors, F. H. (Bud) Griffis, CO Mar. 92, p151-165.
Conditional and Joint Failure Surface Crossing of Stochastic Processes, Øistein Hagen, EM Sept. 92, p1814-

Tritical Issues Related to a Combined Probabilistic Numerical Analysis of Contaminant Transport in Porous Media, Jeffrey D. Cawlfield and Ming-Chee Wu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p232-235.

amissic meechanics and structural and Geolechnical Reliability, Y. K. Lin, ed., 1992), p232-235.

Deterministic and Probabilistic Performance Assessment Methods Applied to Radionactide Migration Through Fractured Geologic Medium, A. B. Gureghian, Y.-T. Wu and B. Sagar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p985-993.

Development of Storage Demand Relation for Reservoirs—A Probabilistic Approach, Mcormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p549-554.

Earthquake-Induced Permanent Deformations: Probabilistic Approach, M. K. Yegian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50.

Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp.

Evaluation of System-Reliability Methods for Cable-Stayed Bridge Design, Michel Bruneau, ST Apr. 92, p1106-1120.

Geotechnical Database Manipulation to Effect Stochastic Analysis, James M. Keane, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p224-227.

Impact of Variability in Pavement Parameters on Backcalculated Moduli, Jessica Rodriguez-Gomez, Carlos Ferregut and Soheil Nazarian, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p261-275

Inspection Planning for Surface Fatigue Cracks, P. Friis-Hansen and H. O. Madsen, (Probabilistic Mechanics and Structural and Gotochnical Reliability, Y. K. Lin, ed., 1992), p312-315.

ed., 1992), p312-313.
Load Duration and System Effects in LRFD for Wood Construction, David V. Rosowsky and Bruce R. Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p78-81.
A Mathematical Tool Set for SORM Reliability Methods, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

A Mathematical Tool Set for SORM Reliability Methods, Karl Breitung, (Probabilistic Mechanics and Structural and Geolechnical Reliability, Y. K. Lin, ed., 1992), p248-251.

A Method for Estimating the In Situ Cohesion of Cemented Conglomerate, Edward A. Nowatzki and David Kidd, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p18-174.

Boulanger, ed., 1992, p18-175.

Boulanger, ed., 1992, p18-178.

Boulanger, ed., 1992, p18-189.

Boulange

p514-519.
Probabilistic Micromechanics in Constitutive Modeling of Granular Material, Ching S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p437-440.
Probabilistic Order of Chaotic Dynamics, A. H.-D. Cheng, C. Y. Yang and K. Hackl, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.

cnants and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p420-423.
Probabilistic Rotordynamics Analysis Using an Adaptive Importance Sampling Method, Y.-T. Wu, T. Y. Torny, O. H. Burnside and M. H. Rheinfurth, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p491-494.
Probabilistic Stability Analysis for Deep-Water Foundation, Knut O. Ronoid and Steinar Bysveen, GT Mar. 92, p394-405.

Quantification of Uncertain Outcomes from Site Charac-terization: Insights from the ESF-AS, William J. Boyle, David K. Parrish and Phillip C. Beccue, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), e657.645.

Random Vibration of the Viscoelastic Structure under Series of Stochastic Excitations, Pawel Sniady and Stanislaw Zukowski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p152-155.

Reliability and Probability in Stability Analysis, John T. Christian, Charles C. Ladd and Gregory B. Baecher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1071-1111.

Reliability-Based Pier Scour Engineering, Peggy A. Johnson, HY Oct. 92, pl 344-1358.

Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, R. H. Sues and L. A. Twisdale, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p511-514.

A Stochastic Approach to the Fatigue Reliability, Yuan Jie Lua, Wing Kam Liu and Ted Belytschko, (Probabilistic Mechanics and Structural and Geotechnical Relia-

hilly, V. K. Lin, ed., 1992, p.324-327.
Stochastic FEM Based on Local Averages of Random Vector Fields, W. Q. Zhu, Y. J. Ren and W. Q. Wu, EM Mar. 92, p.496-511.

Structural Reliability Analysis Methods for Implicit Per-formance Functions, Y.-T. Wu, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p483-486.

Structural Reliability and Proof Testing for Highway Bridges, Gongkang Fu and Jianguo Tang, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p348-351.

Variation of Velocity Distribution along Nonuniform Open-Channel Flow, Chao-Lin Chiu and David W. Murray, HY July 92, p989-1001.

Wave Propagation in a Randomly Layered Medium, Werner Kohler, George Papanicolaou and Benjamin White, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p381-383.

babilistic models

Probabilistic models
Application of a Probabilistic System-Model Based Methodology for the Performance Assessment of Deep Underground Disposal of Nuclear Wastes, T. J. Sumerling and B. G. J. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1647-1657.

Construction Loads on Floors: Results of a Survey, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p499-

A Criticism of Statistical Methods in Probabilistic Models in Structural Reliability, Karl Breitung, (Probabilis-tic Mechanics and Structural and Geotechnical Reliabil-ity, Y. K. Lin, ed., 1992), p236-239.

10), 1. A. Elli, ed., 1992), p.230-239.
Evaluation Method for Advanced Acid Rain Compliance Technology, H. Christopher Frey and Edward S. Rubin, EY Apr. 92, p38-55.
Experimental Validation of a Probabilistic Fracture Mechanics Model, Mircea Grigoriu and A. R. Ingraffea, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p443-446.

Fabric Related Probabilistic Model for Granular Materials, Jamshid Jahedi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p475-478.

Floor Live Load Models and Pattern Load Effects, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p503-506.

Integrated Performance Assessment Model for Waste Package Behavior and Radionuclide Release, Richard Kossik, Ian Miller and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1786-1793.

Modeling Stiffness Degradation in Filamentary Compos-ite Materials, Robert M. Hackett and Kerry T. Slattery, MT May 92, p196-211.

A More Rational Approach to Pavements, Milton E. Harr, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p172-185.

pl 12-103.

A New Probabilistic Model for the Fracture Toughness of Concrete, M. A. Issa, M. Gorelik and A. M. Hammad, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p467-470.

Optimizing Launch-on-Time Probability, George W. Manuachate AS Liu 92, 2460-248.

Optimizing Launch-on-Time Probability, George W. Morgenthaler, AS July 92, p369-386.
Probabilistic Analysis of Groundwater Levels in Hillside Slopes, Lakshmi N. Reddi and Tien H. Wu, GT June Slopes, Laksh 91, p872-890.

p872-890.
 Probabilistic Assessment of Composite Structures, Christos C. Chamis and Michael C. -Y. Shiao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p543-547.
 Probabilistic Evaluation of Bearing Capacity of Shallow Foundations, Azm S. Al-Homoud, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p352-355.
 Probabilistic Particle-Related Constitutive Model for

Probabilistic Particle-Related Constitutive Model for Clayey Material, Mohammad Djavid, (Probabilistic Mechanics and Structural and Geotechnical Reliability,

Y. K. Lin, ed., 1992), p471-474.

Y. K. Lin, ed., 1992), p471-474.

Random Response of Multicrystalline Structures, Dariush Mirfendereski and Armen Der Kiureghian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p800-803.

Recurrence Models of Volcanic Events: Applications to Volcanic Risk Assessment, Bruce M. Crowe, R. Picard, G. Valentine and F. V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2344-2355.

Turk Lording Dats for a Probabilistic Beidet Livel Load

Truck Loading Data for a Probabilistic Bridge Live Load Model, Dan M. Frangopol, George G. Goble and Nuthan Tan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-

An Advanced First-Order Method for System Reliability, Sankaran Mahadevan and Thomas A. Cruse, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p487-490.

Asymptotic Importance Sampling, Marc A. Maes, Karl Breitung and Philippe Geyskens, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1922), p36-99.

K. Lii, ed., 1925, 1976-97.
Gromparison of Some Importance Sampling Techniques in Structural Reliability, S. Engelund and R. Rackwitz, Probabilistic Mechanics and Structural and Gotechnical Reliability, Y. K. Lin, ed., 1992), p108-111.
Conditional and Joint Failure Surface Crossing of Stochastic Processes, Øistein Hagen, EM Sept. 92, p1814-

1839

A Criticism of Statistical Methods in Probabilistic Models in Structural Reliability, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p236-239.

iiy, Y. K. Lin, ed., 1992), p236-239.
Dealing with Uncertainty: From Health-Risk Assessment to Environmental Decision Making, Anthony L. Cox, Jr. and Paolo F. Ricci, EY Aug. 92, p77-94.
The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, Pankaj A. Arora and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource-In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p451-456.
Effect of Active Control to Structural Reliability, J. T. P. Yao and H. G. Natke, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p373-376.
Full Structural Control of Probabilistic Secondary of Probabilistic Using Orientated Simulation,

Evaluation of Probabilities Using Orientated Simulation, Alberto H. Puppo and Raul D. Bertero, ST June 92,

An Exact Expression for the Distribution of Linear Com-binations of Uniform Random Variables, Chung-Chih Lin and Marc P. Mignolet, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p555-558.

Experiences with Experimental Design Schemes for Failure Surface Estimation and Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p252-255.

423

First Order Importance Sampling Method and its Vari-ance Reduction, Gongkang Fu, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p568-571.

1992, p568-571.
First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Küureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p531-534.
The General Theory of Quantitative Risk Assessment, Stan Kaplan, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p11-39.
High Order Statistics in Structural Reliability, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p244-247.

Implications of Design Uncertainty in Benefit-Cost Anal-ysis, Anand Prakash, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p120-

123. Improved First-Order Uncertainty Method for Water-Quality Modeling, Charles S. Melching and Sharath Anmangandla, EE Sept./Oct. 92, p791-805. Indicator Variography for Spatial Characterization of Aquifer Heterogeneities, M. V. Cromer and R. M. Srivastava, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p420-425. Information Theory in Risk Analysis, James D. Enformation Theory in Risk Analysis, James D. Enformation Theory in Risk Analysis, James D. Enformation

Information Theory in Risk Analysis, James D. En glehardt and Jay R. Lund, EE Nov./Dec. 92, p890-904. Live Load Models Based on Will Data, Andrzej S. Nowak and Hani Nassif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

1992, p367-390.
Load-Space Formulation for Time-Dependent Structural Reliability, R. E. Melchers, EM May 92, p853-870.
Modeling Bridge Deterioration with Markov Chains, Mark A. Cesare, Carlos Santamarina, Carl Turkstra and Erik H. Vanmarcke, TE Nov/Dec. 92, p820-833. and Erik H. Vammarcke, I.E. Nov./Dec. 22, ps.20-83.
Moving Toward a Probability-Based Risk Analysis of the Benefits and Costs of Major Rehabilitation Projects, Daniel B. Taylor, Keith D. Hofseth, Leonard A. Shabman and David A. Moser, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), pl 48-

Optimal Discretization of Random Fields for SFEM, Chun-Ching Li and A. Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p29-32. Probabilistic Environmental Risk of Hazardous Materials, Timothy L. Jacobs and P. Aarne Vesilind, EE Nov./Dec. 92, p878-889.

Nov./Dec. 92, p878-889.

Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp.

Probability and Climatology of Droughts in the Western United States, Hugo A. Loaiciga, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p119-129.

Probability Model of Load Exceedances under Cyclic Loadings, Karen C. Chou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p208-211.

Probability of Bridge Failure Due to Pier Scour, P. A. Johnson and B. M. Ayyub, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992).

Quantifying Uncertainty in Site Characterization, William J. Boyle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

p216-219.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166.

Neuzwecki, ed., 1992), plo3-160. Reliability Analysis of Degrading Elasto-Plastic Oscillators, Igor Rychlik and Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p304-307. Reliability Analysis of Truss Structures with Multistate Elements. II, A. Karamchandani and C. A. Cornell, ST Apr. 92, p910-925.

Reliability Analysis of Uncertain Systems Under Ran-dom Loadings, Rwey-Hua Cherng and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p49-52.

Risk Analysis in Water Resources Engineering: Development and Application, Jacques G. Ganoulis, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p1-10.

Risk Based Structural Optimization, Palle Thoft-Christensen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p535-538.

p335-538.
A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p69-72.
Sensitivity Evaluation of Simulation Methods for Reliability Assessment, Bilal M. Ayyub and Chao-Yi Chia, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p240-243.
Statistical Evaluation of Truck Overloads, Jamshid Mohammadi and Nadir Shah, TE Sept./Oct. 92, p651-665.

665.

A Stochastic Model for Crack Initiation and Fatigue Life, Michael R. Emptage and Bevil J. Shaw, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p308-311.

Stochastic Modeling of Short Fiber Reinforced Composites—A Review, Jamshid Mohammadi and Artur S. Kurzydło, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p479-

482.
Storm-Water Detention Storage Design under Random Pollutant Loading, Rafael Segarra-García and Vasudevan G. Loganathan, WR Sept./Oct. 92, p475-491.
Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, Julio E. Pulido, Timothy L. Jacobs and Edison C. P. Lima, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p507-510.
Study of Geoundwater Availability in Case of Drought.

ed., 1992), p301-310.
Study of Groundwater Availability in Case of Drought,
Tiao J. Chang and Choo B. Teoh, (Water Resources
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p130-137.

A Systems Reliability Approach to the Safety of Steel Connections, Janice J. Trautner and Richard M. Ben-nett, (Probabilistic Mechanics and Structural and Geo-technical Reliability, Y. K. Lin, ed., 1992), p495-498.

Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H.-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

TMDS for Vibration Control of Systems with Uncertain Properties, Hector Jensen, Mehdi Setareh and Ralf Peek, ST Dec. 92, p3285-3296.

A Two-Stage Safety Assessment Methodology for Con-struction Activities, M. H. M. Hassan and B. M. Ayyub, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p515-518.

otechnical Reliability, Y. K. Lin, ed., 1992), p515-518. Use of Reliability Methods for the Sequential Analysis of a Small Dam, Eric C. Drumm, Richard M. Bennett and William E. Manrod, Ill., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1126-1136. Wind-Induced Response of Structurally Asymmetric High-Rise Buildings, M. Saiful Islam, Bruce Ellingwood and Ross B. Corotis, ST Jan. 92, p207-222.

Probability density functions

Pronouncy density functions (Constitutive Modeling for Material with Perfect Disor-dered Heterogeneity, X. Lee and C. S. Chang, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p445-448.

Fabric Related Probabilistic Model for Granular Materials, Jamshid Jahedi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), 9475-478.

Micromechanics and Effective Properties of Elastic Par-ticulate Composites, J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p95-98.

Nonlinear System under Non-Gaussian Impulsive Noise Excitation, G. Q. Cai and Y. K. Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), pl48-151.

Numerical Solution of the Transient Fokker-Planck Equation: The Movie, L. A. Bergman and B. F. Spencer, Jr., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p519-522.

Regional Flow-Duration Curves for Ungauged Sites in Massachusetts, Neil Fennessey and Richard M. Vogel, WR July/Aug. 90, p530-549.

Response Statistics of Tension Leg Platforms Under Wind Loads, Jun Zhao and Ahsan Kareem, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p921-933.

Truncation of Infinite Hierarchy for Hysteretic Systems.

Truncation of Infinite Hierarchy for Hysteretic Systems, George Tsiatas and Sau-Lon James Hu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p416-419.

Probability distribution

Probability distribution
Acquisition of Expert Judgment: Examples from Risk Asassment, Stephen C. Hora, FY Aug. 92, p136-148.
Estimates of Extreme Wind Distribution Tails, J. A.
Lechner, S. D. Leigh and E. Simiu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p276-279.
An Event Size Probability Distribution for Risk Analysis,
James D. Englehardt, (Environmental Engineering
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p232-237.
Including Uncertainty of Hydraulic Conductivity into
Drainage Design, J. Gallichand, D. Marcotte and S. O.
Prasher, IR Sept./Oct. 92, p744-756.
Probabilistic Order of Chaotic Dynamics, A. H.-D.
Cheng, C. Y. Yang and K. Hackl, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p420-423.

Probability Distribution for Benefit/Cost Ratio and Net
Benefit, Yeou-Koung Tung, WR Mar/Apr. 92, p133150.

Recurrence Interval of Geophysical Events, Hugo A. Loaiciga and Miguel A. Mariño, WR May/June 91, p367-382.

p367-382. Simulation of Improved Gaussian Time History, Loren D. Lutes and Jin Wang, EM Jan. 91, p218-224. Stochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/Aug, 92, p527-542. Structural Reliability and Proof Testing for Highway Bridges, Gongkang Fu and Jianguo Tang, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p348-351. Vertical Sediment Distribution, Jin Ren Ni and Guang Qian Wang, HY Sept. 91, p1184-1194.

Probability distribution functions

Probability distribution functions
Model Uncertainty Representation in Geotechnical Reliability Analyses, Knut O. Ronold and Peter Bjerager,
GT Mar. 92, p363-376.
Probabilistic Particle-Related Constitutive Model for
Clayey Material, Mohammad Djavid, (Probabilistic
Mechanics and Structural and Geotechnical Reliability,
Y. K. Lin, ed., 1992), p471-474.

Use of Wingz Spreadsheet as an Interface to Total-System Performance Assessment, W. F. Chambers and A. H. Treadway, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493.

Probability theory

ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1056-1070.

Equivalent Linearization for Seismic Responses. I: For-mulation and Error Analysis, Young J. Park, EM Nov. 92, p2207-2226.

y2, p2207-2226.
 Limit-State Interactions in Reliability-Based Design for Wood Structures, David Rosowsky and Bruce Elling-wood, ST Mar. 92, p813-827.
 Modeling Irrigation Schedules for Lowland Rice with Sto-chastic Rainfall, Aflab H. Azhar, V. V. N. Murty and H. N. Phien, IR Jan./Feb. 92, p36-55.
 Point-Estimate Method for Calculating Statistical Mo-ments, K. S. Li, EM July 92, p1506-1511.
 Pophabilistic Design of Corea Drainage Channels, Said M.

Probabilistic Design of Open Drainage Channels, Said M. Easa, IR Nov/Dec. 92, p868-881.

Reliability of Geometrically Nonlinear PR Frames, Achintya Haldar and Yiguang Zhou, EM Oct. 92, p2148-2155.

p2148-2153.

Retention Parameter Estimates for Curve Number Runoff Procedure, W. Carlisle Mills, Adrian W. Thomas,
Anthony L. Dillard and Willard M. Snyder, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p372-377.

Roof-Snow Load for Seismic-Design Calculations, Michael J. O'Rourke and Robert S. Speck, Jr., ST Sept.
92, p2338-2350.

Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-

Precision of Evapotranspiration Estimates Using Neu-tron Probe, Osmar A. Carrijo and Richard H. Cuenca, IR Nov./Dec. 92, p943-953.

Wax-Coupled Borehole Seismic Detector for High-Resolution Measurements, Thomas E. Owen and Jorge O. Parra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p535-538.

Protein sorving Application of Decision Support Systems (DSS) to the Management of Radioactive Wastes, René F. Reitsma and Jacquelyn F. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p469-474.

The Application of Technology to Solving Practical Prob-lems, James R. Walker, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p908-917.

Curriculum for Future Civil Engineers: Practitioner's Viewpoint, Guy E. Jester, El Oct. 89, p357-362.

Viewpoint, Obj. 2 Sester, 104. 59, po3-302.

A Diagnostic Aid for Wastewater Treatment Plants, Catherine D. Perman and Leonard Ortolano, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p86-104.

Improper Uses of Construction Specifications, Bryce Simons, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p316-324.

Path-Finder: Al-Based Path Planning System, A. A. Morad, A. B. Cleveland, Jr., Y. J. Beliveau, V. D. Fran-sisco and S. S. Dixit, CP Apr. 92, p114-128. Reflection in Problem Solving and Design, C. J. Khisty and L. L. Khisty, El July 92, p234-239.

SightPlan Model for Site Layout, 1. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766. Systems Analysis Applications at Hydrologic Engineering Center, Arien D. Feldman, WR May/June 92, p249-

Using Conflict Management for Better Decision Making, Amarjit Singh and Demetres A. Vlatas, ME Jan. 91, p70-82.

Acquisition of Expert Judgment: Examples from Risk As-sessment, Stephen C. Hora, EY Aug. 92, p136-148.

Arizona's Uniform Traffic Impact Procedures, Peter M. Lima and Eric Kalivoda, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p94

The Dialogue of Players on the Development Stage, Bar-bara Barnow, (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.200-204.

Water Management Under Drought Conditions: An Overview of Practices by Non-Federal Entities, Darrel G. Fontane and Donald Frevert, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p354-339.

Al Supported Process Planning for Automated Rebar Fabrication, Md. Salim and Leonhard E. Bernold, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p872-879.

Jett R. Wright, ed., 1792, pp.12-072.
Chlorination/Dechlorination and Post Aeration Key Operating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p623-627.

425

Classifying Process Control Information, Victor E. Sanvido and John Messner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p340-347.

p346-347.

Gas Phase Control for Oxygen-Activated Sludge, R. C. Clifft, EE May/June 92, p390-401.

Testing an Expert System for the Activated Sludge Process, Wenje Lai and P. M. Berthouex, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p124-146.

Tests on the Application of CAN-Q to Construction Process Modeling, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p199-206.

1992), p199-206.

Processing
Controlling Pulsed Incompressible Flow, Richard Ian Stessel, EY Apr. 92, p1-17.

Evaluation of Processing Options for Lunar Oxygen Production, Andrew Hall Cutler and Robert D. Waldron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p704-713.

Isotopic Separation of 3Her He From Solar Wind Gases Evolved from the Lunar Regolith, William R. Wilkes and Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.

Lunar Surface Mine Feasibility Study, Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1092-1103.

Object-Oriented Model of Engineering Design Standards, Jamnes H. Garrett, Jr. and M. Maher Hakim, CP July 92, p323-347.

James H. Ostrett, Jr. and M. Maner Hakim, CP July 92, p32-347.

On the Beneficiation and Comminution of Lunar Regolith, Larry W. Mason, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138.

A Proposed Methodology for Ranking Space Resource Utilization Processes, R. D. Waldron and A. H. Cutler, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p690-703.

Sintering of Lunar Glass and Basalt, Carlton C. Allen, Joy A. Hines, David S. McKay and Richard V. Morris, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-1218.

Yacuum Melting and Mechanical Testing of Simulated Lunar Glasses, J. E. Carsley, J. D. Blacic and B. J. Pietka, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1219-1231.

Production planning

Production planning
Analysis of Two Lunar Oxygen Production Processes,
Laura Hernandez and H. A. Franklin, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p576-585.

1992), p576-585.

Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1139-1149.

Design Concepts for a Lunar Concrete Production Facility, Richard M. Drake, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p34-42.

Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p774-785.

Evaluation of Processing Options for Lunar Oxygen Pro-

Evaluation of Processing Options for Lunar Oxygen Production, Andrew Hall Cutler and Robert D. Waldron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p704-713.

The Feasibility of Processes for the Production of Oxygen on the Moon, Lawrence A. Taylor and W. David Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p752-762.

Hydrogen Reduction of Lunar Soil and Simulants, Robert O. Ness, Jr., Laura L. Sharp, David W. Brekke, Christian W. Knudsen and Michael A. Gibson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p617-628.

1792, poli-vee.
Lunar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992). p739-751.

ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p739-751.

Lunar Oxygen—The Reduction of Glass by Hydrogen, Carlton C. Allen, David S. McKay and Richard V. Morris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p629-640.

A Modified Sulfate Process to Lunar Oxygen, Thomas A. Sullivan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p641-650.

Production of Lunar Oxygen, Iron, Magnesium, and Silicon by Aqueous Hydrofluoric Acid Leaching, William N. Agosto, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p678-689.

Production of Oxygen by Electro-Reduction of Lunar Ores, B. Mishra, D. L. Olson, J. J. Moore and W. A. Averill, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677.

Recent Developments of the Carbotek Process for Production of Lunar Oxygen, Christian W. Knudsen, Michael A. Gibson, David J. Brueneman, Seishi Suzuki, Tetsuji Yoshida and Hiroshi Kanamori, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p597-605.

1992), p597-605.

Simple and Efficient Methods to Produce Construction Materials for Lunar and Mars Bases, Yoji Ishikawa, Tetsuo Sasaki and Tetsumi Higasayama, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1335-1346.

Steady State Composition with Low Fe<sup>2+</sup> Concentrations for Efficient O<sub>2</sub> Production by "Magma" Electrolysis of Lunar Soils, Larry A. Haskin and Russell O. Colson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p651-665.

roductivity

Production of Neural Networks in Earthmoving Equipment Production Estimating, Saeed Karshenas and Xin Feng. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p841-847.
Automating The Corps, James Denning, CE Apr. 92,

p65-67.

Comparison of Labor Productivity, H. Randolph Thomas, Steve R. Sanders and Suha Bilal, CO Dec. 92, p635-650.

Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-281.

281. Customizing CADD Software, Robert M. Pasley, CC Aug. 92, p7-9. Effects of Scheduled Overtime on Labor Productivity, H. Randolph Thomas, CO Mar. 92, p60-76. Electronic Spreadsheets in Structural Design, David O. Knuttunen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1187-1194. 1194.

Financial Incentive Programs for Average-Size Construc-tion Firm, Roger W. Liska and Bill Snell, CO Dec. 92,

p667-676.

An Information System Architecture for Construction Materials, Sami Dib and Francois Grobler, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p332-339.

Knowledge-based System for Duration Estimating and Crew Selection for Construction Activities, Ayman A. Morad and Gerardo D. Diaz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p190-198.

Making Teamwork Work, Mel Hensey, CE Feb. 92, p68-

Modeling Construction Labor Productivity, H. Randolph Thomas, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726.

Modern Crane Control Enhancements, Jeffrey T. Hub-bell, Bruce Koch and Dennis McCormick, (Ports '92, David Torseth, ed., 1992), p757-767.

Nonmonetary Incentives: It Can be Done, Gary W. Fischer and Norman P. Nunn, ME Jan. 92, p40-52.

On-Off Terminal Ship-to-Rail Transfer, Asaf Ashar, (Ports '92, David Torseth, ed., 1992), p108-120.

(2013 72, DAVIG LORSEIR, ed., 1992), p108-120.

An Optimization Methodology for Crew Assignment Based on Maximizing Labor Productivity, John A. Kuprenas and Anthony D. Songer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p182-189.

Planning for Construction Automation by Integrating Information Flow with Software and Hardware Controls, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p856-863.

ressure Suit Requirements for Moon and Mars EVA's, Eric M. Jones and Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1701-1708.

A Removable Submarine Cover for Drydock No. 2 Mod-ernization, Ted Bobroski and Joseph J. Bonasia, (Ports 92, David Torseth, ed., 1992), p506-519.

92. David Torseth, ed., 1992), p506-519.
Site-Level Construction Information System, Victor E. Sanvido and Boyd C. Paulson, CO Dec. 92, p701-715.
Small Utility GIS, Didier Goubert and Robert Newton, CE Nov. 92, p69-71.
Space Habitat Environmental Health: A Systems Issue, Jon R. Schulz and Ralph N. Eberhardt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2023-2034.

Using Quality Circles to Raise Productivity and Quality of Work Life, Yehiel Rosenfeld, Abraham Warszawski and Alexander Laufer, CO Mar. 92, p17-33.

Professional activities

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Professionalism: Cornerstone of Engineering, Perry L.

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Technology Transfer to Developing Countries, William J. Carmack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p227-231.

Tenure—Analysis for Professional Engineers in Educa-tion, William Lawson Magette, El Apr. 90, p142-147. Younger Member Groups in ASCE: Are They Truly Worthwhile?, CE Dec. 92, p76-77.

Professional engineering
Can Civil Engineers Make the Difference by Involvement in the Political Process? Karen S. Irion, El Oct. 89, p441-445.

Professionalism: Cornerstone of Engineering, Perry L. Smith, El July 92, p258-260.

Professional personnel Issues in Human Resources: Managing Talent in the 21st Century, Linda Allen and Joseph Sewards, ME Oct. 92, p340-345.

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Civil Engineers Shaping Society: Our Social Responsibilities, Dennis A. Randolph, El Jan. 92, pl0-15.
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Critical Issues for Engineering Managers, Delon Hampton, ME July 92, p235-242.
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ton, ME July 92, p235-242.
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Progress and Future Problems, John W. Fondani, C.O. Sept. 91, p380-392.
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It's Time to Redefine Minority Businesses (Itr), Nina G. Zolten, CE May 92, p30.
Plain Engineering: Philosophical and Ethical View, Steven S. Crider, El Apr. 90, p148-155.
Pactitioner Involvement with Engineering Ethics and

Practitioner Involvement with Engineering Ethics and Professionalism, Enno Koehn, El Jan. 92, p49-55. Practitioners in Classroom: Viable Tool in Civil Engineering Education, James W. Poirot, ME Oct. 90, p388-993.

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Public-Safety Issues in Collapse of L'Ambiance Plaza, Frank J. Heger, CF May 91, p92-112.

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Standard of Care for Delivery of Engineered Products, James C. Porter, El Apr. 90, p193-201.

Supermarket Roof Collapse in Burnaby, British Columbia, Canada, C. Peter Jones and N. D. Nathan, CF Aug. 90, p142-160.

90, p142-160. Systems Analysis in Water-Distribution Network Design: From Theory to Practice, I. C. Goulter, WR May/June 92, p238-248.

72, p.33-249.
Technology is Here—Are You Ready? Paul A. LeMenager, ME July 92, p.261-266.
Upgrading the First Professional Degree, Louis L. Guy, Jr., El Oct. 92, p.345-348.

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Visioning: The Future of Civil Engineering, C. R. "Chuck" Pennoni, El July 92, p221-233.

Professional registration Members Voice Concern on ASCE's Certification Plan

for Engineers, NE Feb. 92, pl.
Practitioner Involvement with Engineering Ethics and Professionalism, Enno Koehn, El Jan. 92, p49-55.
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Professional role
The Application of Technology to Solving Practical Problems, James R. Walker, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p908-917.

Cost and Quality Management, Richard Duttenhoeffer, ME Apr. 92, p167-175.

Depositions and Trial Testimony, A Positive Experience? Robert W. Day, El Apr. 92, p129-131.

Engineering Issues for Early Lunar-Based Telescopes, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 92, p323-336.

Engineering Pre-engineered Buildings, Alexander Newman, CE Sept. 92, p58-61.

Ethical, Legal and Professional Responsibilities of Engineers to Owners and Contractors, Lawrence I. Erdos, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p989-1002.

Future Concerns in Environmental Engineering Graduate Education, Richard G. Luthy, David A. Bella, James R. Hunt, James H. Johnson, Desmond F. Lawler, Charles R. O'Melia and Frederick G. Pohland, El Oct. 92,

Geotechnology: An Environment of Change, Jean-Yves Perez, CE Dec. 91, p44-45. Introduction to Ownership and Transition. I: Ownership Transfer Considerations, Robert E. Olden, ME Oct. 92, p367-375.

Is It Good Business to Be a Citizen Engineer? Brent A. Campbell, CE Oct. 91, p54-55.

The Most Dangerous Technology Ever Built, CC Oct. 92, p8,12.

Politics and Engineering, Robert P. Cannon, CE Dec. 91, p69-70.

Practitioners in Classroom: Viable Tool in Civil Engineering Education, James W. Poirot, ME Oct. 90, p388-393.

Role of the Coastal Engineer in Civil Engineering Practice, ASCE Coastal Engineering Technical Committee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p918-934.

Using Conflict Management for Better Decision Making, Amarjit Singh and Demetres A. Vlatas, ME Jan. 91, p70-82.

Need for "Professional" Education for Professional Engineers, T. E. Fenske and S. M. Fenske, El Oct. 90,

## rofessional societies

New Federal Ethics Regulations Deferred—For Now at Least, NE Feb. 92, p1.

NSPE Announces Awards, CE Apr. 92, p13-14.

System Engineering and Risk, Brian W. Mar, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p304-310.

Hydraulic Geometry of Threshold Channels, Panayiotis Diplas and Gregorio Vigilar, HY Apr. 92, p597-614.
Roughness Measurements of Airfield Pavements, Elson B. Spangier, Anthony G. Gerardi and Hisso Tomita, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366.

Experience with Beach Fill Equilibration and Recommended Design Guidelines, Erik J. Olsen, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),

Laboratory Investigation of Beach Profiles in Tailings Disposal, Xiaosheng Fan and Jacob Masliyah, HY Nov. 90, p1357-1373.

Prediction of Storm/Normal Beach Profiles, Robert A. Dalrymple, WW Mar./Apr. 92, p193-200.

Seismic Response of R/C Frames with Irregular Profiles, Sharon L. Wood, ST Feb. 92, p545-566. Water Taste Testers Are Thirsting for Work, CE Jan. 92,

Managing for Profit, Chester A. Shuman, CE Nov. 92, p72-73.

Reappraising the Space Shuttle Program, Roger A. Pielke, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2220-2230.

A Design Component Library Based on Design Stan-dards, M. Maher Hakim and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992b, p105-112.

Jeff R. Wright, ed., 1992), p105-112.
A Facility Programming Product Model, Gregory M. Perkinson, Francois Grobler and Victor E. Sanvido, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p41-48.
A Framework for the Documentation, Representation, and Processing of Design Standards, Nobuyoshi Yabuki and Kincho H. Law, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p97-104.

Nonlinear Structural Analysis on a Distributed System, Eric M. Lui and Fred H. Schlereth, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p647-654.

Optimal Locations of Monitoring Stations in Water Dis-tribution System, Byoung Ho Lee and Rolf A. Dein-inger, EE Jan./Feb. 92, p4-16.

Skull Object Space: Essential Knowledge Typologies for Proprietary Brand Name or Equal Specifications Interpretation, Jesus M. De La Garza and Gaye A. Oralkan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p614-622.

Solid Waste Management: The Extension Service Initia-tive, M. F. Dahab and W. E. Woldt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-548.

User Interface for Pipe Network Program, István Lippai, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p1049-1054.

Frograms

Advances in Ground Operations for the Next Generation
Space Launch Vehicle Programs, Mark Moeller and
Shelly Ewing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p157-1566.

The Army Corps of Figures? (ACE) Interaction with the

and Russell J. Miller, ed., 1992, p1531-1506.
The Army Corps of Engineer's (ACE) Interaction with the
Mission to Planet Earth Initiative, Robert C. Lozar,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p2094-2103.

Delaware Estuary Nonpoint Source Control Program, William Whipple, Jr. and Van Dyke Polhemus, (Water Resource-Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p718-723.

Development of a Water Conservation Program for the Spring Valley Water Company, Frank Gradilone, III., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p754-759.

mad Karamouz, ed., 1992, p.794-799. French High-Level Waste Management Research and Development Program, J. P. Moncouyoux and C. G. Sombret, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409.

Global Change: Geoengineering and Space Exploration, Lyle M. Jenkins, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2072-2081.

Human Factors Programs for High-Level Radioactive Waste Handling Systems, Daniel J. Pond, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1547-1554.

The Importance of Verified Simulation Model in a Sewerage Rehabilitation Program, Phil Wildbore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p730-735.

Karamouz, ed., 1992, p. 190-133.

An Integrated Approach to Strategic Planning in the Civilian High-Level Radioactive Waste Management Program, William M. Sprecher, Jonathan Katz and Richard J. Redmond, (High Level Radioactive Waste Management Program Committee, 1992), p. 1559-1564.

ment Program Committee, 1992, p.193-190-190-1 Launching Facility Constraints on the Space Exploration Initiative, Kadett Chan and Alex J. Montoya, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2044-2055.

Licensing Issues: Clarification and Convergence, John P. Roberts, Linda J. Desell, Mary L. Birch, Lester Berkowitz and Joseph F. Bader, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236.

Management of Portland's Combined Sewer System, Claudia L. Zahorcak, Lester E. Lee and Gordon A. Ni-cholson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p468-473.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, Dinesh C, Gupta, Jacob Philip, Loren L Lorig and Asadul H. Chowdhury, High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-gram Committee, 1992), p212-219.

gram Committee, 1992), p212-219.

Nuclear Waste Repository Program Oversight: Strategies of the Situs Jurisdiction, Phillip A. Niedzielski-Eichner and Elgie Holstein, High Level Radioactive Waste Management Program Committee, 1992), p1927-1937.

Program Analysis and Compliance Management, Thomas W. Woods and Dillard B. Shipler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1724-1729.

Solid Waste Management: The Extension Service Initia-tive, M. F. Dahab and W. E. Woldt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-548.

Space Exposed Experiment Developed for Students, Doris K. Grigsby and Bob Melton, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2161-2171.

System Integration for the Disposal of Defense Transu-ranic Waste, Mark W. Frei, Joseph A. Coleman and Sandra Fucigna, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p409-415.

Towards Confidence in Transport Safety. Demonstrating an Extraordinary Safety Program, R. W. Robison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1921-1926.

Towards Earning Public Trust and Confidence Through Accountability, Allen Benson, William Morgan and Deirdre Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1917-1920.

ment Program Committee, 1992), p1917-1920. Understanding the High-Level Radioactive Waste Program Through the Cooperative Agreement Process, L. Cheryl Runyon, Millard Peck, III, and Glenn H. Gardner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p152-155. Value-Added QA Within the High-Level Radioactive Waste Program, Tom Colandrea, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1303-1309.

The Virtual Mission: A Step-Wise Approach to Large

The Virtual Mission: A Step-Wise Approach to Large Space Missions, Elaine Hansen, Morgan Jones, Adrian Hooke and Richard Pomphrey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1523-1529.

p1323-1329.
Vision for Planetary Exploration, John F. Connolly, Robert K. Callaway, Mark K. Diogu, Gene R. Grush, E. Mason Lancaster, William C. Morgan, David A. Petri, Barney B. Roberts, Lester A. Pieniazek, Thomas M. Polette and Larry D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, d., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-2195.

aste Caretakers: Who Will They Be? A. Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1485-1490.

Progressive failure

Progressive failure
Discontinuous Deformation Slope Stability Analyses,
An-Bin Huang and Max Y. Ma, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed,
ed. and Ross W. Boulanger, ed., 1992), p479-492.
Discrete Element Method for Slope Stability Analysis,
Ching S. Chang, GT Dec. 92, p1889-1903.
Investigation of L'Ambiance Plaza Building Collapse,
Daniel A. Cuoco, David B. Peraza and Thomas Z.
Scarangello, CF Nov. 92, p211-231.
Soil Strengths from Back Analysis of Slope Faitures, J.
Michael Duncan and Timothy D. Stark, (Stability and
Performance of Slopes and Embankments II, Raymond
B. Seed, ed. and Ross W. Boulanger, ed., 1992), p890904.

Progressive waves Lagrangian Motions in Simple Kinematic Oscillatory Flow Field, Kuo-Chuin Wong, WW Jan./Feb. 91, p29-

Project control Comparing Object-Oriented and Relational Data Models for Project Control, Jae-Jun Kim and C. William Ibbs, CP July 92, p348-369.
Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704.
Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.

CO Mar. 91, p163-175.

Project evaluation
Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111.
Environmental Impact Analysis of Coastal Projects, Jon T. Moore, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p952-957.

Evaluation of Proposed Port Facilities, Charleston Harbor, South Carolina, Samuel B. Heltzel, (Ports '92, David Torseth, ed., 1992), p791-801.

Irrigation Project Modernization, H. Plusquellec and C. M. Burt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p197-202.

RCC Dam Construction—A Contractor's View, Jeffrey C. Allen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-226.

Aspects of Virtual Master Builder, Victor E. Sanvido, Steven J. Fenves and John L. Wilson, El July 92, p261-

Boston's City within a City, Paul Tarricone, CE Oct. 92,

Boston's City within a "Flow Through" Process, p40-43.
Building a Pipeline—Not a "Flow Through" Process, Roddy Rogers, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p591-301.

597.

Collective Excellence: Building Effective Teams, Mel Hensy, 1992, 0-87262-841-8, 110pp.

Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.

Cost and Quality Management, Richard Duttenhoeffer, ME Apr. 92, p167-175.

Cranes, Concrete, Construction...and Computers, Paul Tarricore, CE June 92, p44-47.

Critical Success Factors for Construction Projects, Victor Sanvido, François Grobler, Kevin Parfitt, Maris Giu-

Critical Success Factors for Construction Projects, Victor Sanvido, Francois Grobler, Kevin Parfitt, Moris Guvenis and Michael Coyle, CO Mar. 92, p94-111. Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704. Frontloading for Successful Team-Built Projects, Louis J. Martinez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p504-507. Gate Maritime Wharf and Intermodal Facility, Viswanath K. Kumar, William L. Allen and Thomas A. Mantia, (Ports '92, David Torseth, ed., 1992), p43-57. GIS Conference Highlights Broadly Focused Systems, CE July 92, p22.

GIS Conference Highlights Broadly Focused Systems, CE July 92, p22.
 The Heartbeat of the Artery, David L. Druss and Burton P. Kassap, CE Jan, 92, p44-46.
 Holistic Approach to Irrigation Management in Developing Countries, Phillip Z. Kirpich, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p263-268.
 Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.
 Infrastructure Privatization Accelerates, CE Mar. 92, p18.20.

p18,20.

p18.20.

Knowledge Elicitation Strategies and Experiments Applied to Construction, Jesus M. De La Garza and C. William Ibbs, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p69-85.

Knowledge-Based Advisory System for Public-Sector Design-Build, Anthony D. Songer, C. William Ibbs, James H. Garrett, Thomas R. Napier and Annette L. Stumpf, CP Oct. 92, p456-471.

Lessons Learned—Milwaukee Water Pollution Abatement Program, Gary D. Beech, ME Apr. 92, p186-191.

Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175. Managing for Profit, Chester A. Shuman, CE Nov. 92, p72-73.

Manholes and Microtunneling, Evarett Cruz, Jr., CE Dec. 92, p52-55.

Manholes and Microtunneting, Evarett Cruz, Jr., CE Dec. 92, p52-55.

Microcomputer-Based Project Management for Small Engineering Firms, Thomas E. Glavinich, ME Jan. 92, p53-62.

MRS Project Management, J. W. Doman and J. Vlahakis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1896-1902.

Object-Oriented Programming, Walid T. Keirouz, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p80-103.

An Owner's Viewpoint: Changes Needed, Terry W. Towle, CE May 92, p6.

A Pilot Sounding Rocket Project Utilizing Student Labor, Sue A. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2317-2327.

Problems and Potential of Irrigated Agriculture in Sub-Saharan Africa, Mahmood Alam, IR Mar/Apr. 91, p155-172.

p155-172.

p135-172.

Project Management: Keys to Success, David Bentley and Gary Rafferty, CE Apr. 92, p58-59.

Project Management Oversight—Good Tool for Program Managers, Michael G. Goode, ME July 92, p243-253.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Using a Lunar Base Scenario Context in Business Educa-tion, Cathleen S. Burns and Sherry K. Mills, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2172-2187.

1992), p21/2-218.

A Vision for Planetary Exploration, John F. Connolly, Robert K. Callaway, Mark K. Diogu, Gene R. Grush, E. Mason Lancaster, William C. Morgan, David A. Petri, Barmey B. Roberts, Lester A. Pieniazek, Thomas M. Polette and Larry D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-2195. What a Place to Put a Landfill, CE June 92, p11.

Project managers

Managing for Profit, Chester A. Shuman, CE Nov. 92, p72-73.

Staffing Up for a Major Program, Edward H. McCormick, David L. Pratt, Kurt B. Haunschild and Jean S. Hegdal, CE Jan. 92, p60-62.

Project planning
CADD Utilization in Residential Construction: From
Subdivision Design to Dwelling Unit, M. G. Syal,
McIntyre and J. H. Willenbrock, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
Constructability.

Constructability and Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89.

the ASCE Construction Division, CO Mar. 91, p67-89. Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666. Critical Success Factors in Winning BOT Contracts, Robert L. K. Tiong, Khim-Teck Yeo and S. C. McCarthy, CO June 92, p217-228. Irrigation Project Modernization, H. Plusquellec and C. M. Burt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p197-202. Knowledge-Based Advisory System for Public-Sector De-

1992), p197-202.

Knowledge-Based Advisory System for Public-Sector Design-Build, Anthony D. Songer, C. William Ibbs, James H. Garrett, Thomas R. Napier and Annette L. Stumpf, CP Oct. 92, p456-471.

Lessons Learned—Milwaukee Water Pollution Abatement Program, Gary D. Beech, ME Apr. 92, p186-191.

Managing Existing Reservoirs to Meet New Challenges, Morris Israel and Jay R. Lund, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p673-678.

An Owner's Viewpoint: Changes Needed, Terry W. Towle, CE May 92, p6.

Problems and Potential of Irrigated Agriculture in Sub-Saharan Africa, Mahmood Alam, IR Mar./Apr. 91, p155-172.

Project Management: Keys to Success, David Bentley and Gary Rafferty, CE Apr. 92, p58-59.

Gary Rafferty, CE Apr. 92, p58-59.

Risk Assessment or Engineering Standards: Toward a Decision Framework, Leonard Shabman, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p40-51.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Lithan Water Management in the 21st Conture Decision of the Conture Decisi

Urban Water Management in the 21st Century, Daniel A. Okun, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p150-160.

Hypervelocity Impact Penetration Phenomena in Aluminum Space Structures, William P. Schonberg, AS July 90, p173-185.

Projectile Shape and Material Effects in Hypervelocity Impact Response of Dual-Wall Structures, William P. Schonberg and Kent Darzi, AS Oct. 92, p405-424.

Hypervelocity Impact Penetration Phenomena in Alumi-num Space Structures, William P. Schonberg, AS July 90, p173-185.

Application of Large Infrastructure Project Financing to Construction Projects in Space, Michel Lyonnet du Moutier and Patrick Cohendet, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 72196-2297. p2196-2207

Building a Space Infrastructure: The Reclamation Experience, Stephen L. Gillett, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p69-77.

Cost Effective Risk Allocation for Coastal Engineering Projects, Robert J. Smith, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1021-1036.

tice '92, Steven A. Hughes, ed., 1992), p1021-1036. Environmental Management Issues in Developing Countries of Southeast Asia, Au-Yeung Yin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p631-635. ESCAPE: Small Payload Strategies, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1542-1548.

Externalizing Project-Specific Knowledge in Structural Design, Taufiq Rafiq and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p386-393.

The International CHEMVAL Project: Verification and Validation of Geochemical Models, D. Read and T. W. Broyd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1421-1428.

Committee, 1992), p1421-1428.

Moving Toward a Probability-Based Risk Analysis of the Benefits and Costs of Major Rehabilitation Projects, Daniel B. Taylor, Keith D. Hofseth, Leonard A. Shabman and David A. Moser, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p148-

Social and Science Issues in the Local Environment, L.
Gilbert and M. Robinson, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1813-1818.
Space Education Day, D. O. Swint, M. E. McGuinness,
W. R. Sharp, S. K. Swint, J. T. Curry, B. D. Bryant, L.
A. Willar and S. Solari, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadch, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160.

The Feasibility of Processes for the Production of Oxygen on the Moon, Lawrence A. Taylor and W. David Carri-er, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p752-762.

Lunar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p739-751.

ed., Stein Sture, ed. and Nussen J. Miller, ed., 1972, p739-751.

Lunar Oasis, Michael B. Duke and John Niehoff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p48-68.

Mars Mission Designs: Comparing the Near Term Options, Malcolm A. LeCompte and Julie P. Stets, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p726-738.

On the Beneficiation and Comminution of Lunar Regolith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1127-1138.

Rocket Fuel to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p271-2281. p2271-2281.

p2211-2261.
Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and H. Hawkins, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564.

Property values

Positive Influence of Impact-Fee Policy in Urban Planning and Development, Arthur C. Nelson, James E. Frank and James C. Nicholas, UP June 92, p59-64.

Price Effects of Landfills on Residential Land Values, Arthur C. Nelson, John H. Genereux and Michelle Generux, UP Dec. 92, p128-137.

Protective coatings
Transportation of Demineralized Water: Case Study, Ali
A. Quraishi and Muhammad S. Al-Amry, TE July/Aug.
92, p576-585.

Protective struct

Protective structures
Constructing Radiation Shields with Textiles for Lunar Applications, J. Lewis Dorrity and James W. Brazell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-377.

Metallized Microballoon EMI Shielding Materials, Boyle-

C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.

Taming Tornado Alley, Harold W. Harris, Kishor C. Mehta and James R. McDonald, CE June 92, p77-78.

Communication Protocol in Structural Design Objects, Jamal A. Abdalla and Sanjai Tiwari, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p269-276.

ed., 1992), p.209-276. Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Solvent Substitutes, Benerito S. Martinez, Ir., Ricardo B. Jacquez and Walter H. Zachritz, II., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawewere, ed., 1992), p169-

174.
Use of Contaminant Mobility and Transport Parameters to Determine Water Testing Protocol, Paul D. Robillard and Perry B. Kubek, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p831-836.

Computer-Controlled Brick Masonry, Leonhard E. Ber-nold, Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-160.

Prototypes
The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.
A Prototype Control System for Construction Monitoring, Dulcy M. Abraham, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p631-638.

Prototype Lunar Base Construction Using Indigenous Materials, John Amin Happel, Kaspar Willam and Benson Shing, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 12-122.

Pseudodynamic method
Pseudoforce Method of Solution for Highly Nonlinear
Systems, Satish Nagarajaiah and Andrei Reinhorn,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p913-920.

ublic access

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p58-71.

Public benefits

Is An Instream Flow Need a Beneficial Use? Robert T.

Milhous, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p368-373.

Is It Good Business to Be a Citizen Engineer? Brent A.

Campbell, CE Oct. 91, p54-55.

Public health

Public health
Decision Management for the Hanford Environmental
Dose Reconstruction Project, William J. Roberds, H.
A. (Walt) Haerer and Detlof von Winterfeldt, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p1743-1750.
Near-Field Radiation Doses from Transported Spent Nuclear Fuel, R. F. Weiner and K. S. Neuhauser, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p1205-1208.
Overview of the Hanford Environmental Dose Recon-

1992, p1.203-1208.

Overview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Ikenberry, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204.

gram Committee, 1992), pl.200-1204.
An Overview of the Yucca Mountain Global/Regional
Climate Modeling Program, Robert P. Sandoval, Yugal
K. Behl and Starley L. Thompson, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
21182-1198. p1188-1195.

pt 168-1193.

Radiological Environmental Monitoring for the Yucca Mountain Site, K. J. Shenk, J. K. Prince and C. D. Sorensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2313-2317.

Padiological Environmental Criteria for Solid Radioactive Productions of the Padiological Production Criteria for Solid Radioactive.

Commutee, 1992, p2313-2317.

Radiological Protection Criteria for Solid Radioactive Waste Disposal, J. R. Cooper, I. M. Barraclough and S. F. Mobbs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p237-242.

The Role of Performance Agreement in Validation Part

The Role of Performance Assessment in Validation, Reg-ulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p99-101.

mittee, 1726, 197101.
Session Summary—Risk Communication and Perception, Robert O'Connor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p348-

Public information programs

Can We Educate Public on Sound Engineering? (ltr),
Richard P. Canon, CE Feb. 92, p32. Columbus Discovers Traffic Management, CE Apr. 92,

Engineers are 'Ready for Prime-Time Players', CE July 92, p16.

Enhancing the Partnership—Improving Public Awareness Through Education and Information, Carol L. Hanlon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1794-1798.

Committee, 1992), p1794-1798.
Identification of Inappropriate Driving Behaviors, John M. Mason, Jr., Kay Fitzpatrick, Deborah L. Seneca and Thomas B. Davinroy, TE Mar/Apr. 92, p281-298.
The Impact of Risk Communications on Public Understanding: Combining a Survey with an Experiment, R. E. O'Connor and R. J. Bord, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p574-581.

Keeping the Public in Public Works Facility Planning, Margaret B. Umphres, Flisa Stevenson, Sara M. Katz and Robin Spear, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p238-243.

Mars Basing, Brent Sherwood, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1964-1975.

The Monitoring of Water Conservation Behavior and Attitudes in Southern California, Duane D. Baumann, Eva Opitz and Diane Egly, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p117-134.

Perspectives on the Science Advisor Program at Sandia National Laboratories, P. C. Bennett, R. B. Heath, A Podlesny and P. A. Channon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1826-1831.

Phobias and Underutilization of University Scientists: A Suggested Program, York T. Mandra, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1799-1806.

Responding to Public Opinion About Cumulative Long-Term Risks: Analysis and Communication of Risks from Climate Change and Hazardous Waste Sites, Robert E. O'Connor and Richard J. Bord, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), po7-77.

saint, ed., 1992), port.

Science and Students: Yucca Mountain Project's Educational Outreach and Public Tour Programs, April VanCamp Gil, Paula Austin, Erin L. Larkin and Effic
Harle, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p1819-1825.

Session Summary—Risk Communication and Perception, Robert O'Connor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p348-

Can Civil Engineers Make the Difference by Involvement in the Political Process? Karen S. Irion, El Oct. 89, p441-445.

Education: Gateway to the Solution, Ginger P. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10.

Incineration—Panaeea or Pandemic? Harvey W. Rogers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p157-162.

Perceived Risk Impacts from Siting Hazardous Waste Fa-cilities, R. C. Hemphill, B. K. Edwards and G. W. Bassett, Jr., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992.) p582-584

Public Attitudes About Radioactive Waste, Ann S. Bisconti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1-3.

Responding to Public Opinion About Cumulative Long-Term Risks: Analysis and Communication of Risks from Climate Change and Hazardous Waste Sites, Robert E. O'Connor and Richard J. Bord, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p67-77.

Science and Students: Yucca Mountain Project's Educa-tional Outreach and Public Tour Programs, April Van-Camp Gil, Paula Austin, Erin L. Larkin and Effie Harle, (High Level Radioactive Waste Management, High Level Radio

Committee, 1992), p1819-1825.

Session Summary—Risk Associated With Climate Change, Ronald M. North, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p343-345.

Session Summary—Risk Communication and Perception, Robert O'Connor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p348-349

A Storm Water Utility Case Study, Salt Lake City, Utah, Charles H. Call, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p792-797.

Towards Earning Public Trust and Confidence Through Accountability, Allen Benson, William Morgan and Deirdre Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1917-1920.

ment Program Committee, 1992), p1917-1920. Understanding the Medicial Applications of Radionuclides, Darrell W. McIndoe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1478-1484. The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, Nona F. Shepard and Donald L. Champagne, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p593-599.

Public participation

Can Civil Engineers Make the Difference by Involvement in the Political Process? Karen S. Irion, El Oct. 89, p441-445.

p441-445.
Critical Public Issues for Well Head Protection, Daniel J. Van Abs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p274-279.
Education: Gateway to the Solution, Ginger P. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10.
Engineer, Between to Reofs to Lecture School, Children Program Committee, 1992, p4-10.

Engineer Returns to Roots to Lecture School Children, NE Apr. 92, p16.

Engineers Week Participation Takes Many Forms for Civil Engineers, NE Apr. 92, p16.

High Level Radioactive Waste Management, 2 vols., High Level Radioactive Waste Management Program Com-mittee, (James S. Tulenko, chmn.), 1992, 0-87262-891-4, 2492pp.

Identifying the Critical Path and Building Coalitions for Restoring Degraded Areas of the Great Lakes, J. H. Hartig, D. P. Dodge, L. Lovett-Doust and K. Fuller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p823-830.

mad Karamouz, etc., 1972, pod.3-030.

Interfacing with the Public on Water-Related Issues—
What TVA is Doing, Janet C. Herrin and Arland W.
Whitlock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Sohations, Mohammad Karamouz, ed., 1992), p293-298.

Keeping the Public in Public Works Facility Planning, Margaret B. Umphres, Fliss Stevenson, Sara M. Katz and Robin Spear, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p238-243.

Mandated Public Participation in Siting of Hazardous and Conventional Waste Facilities: The Illinois Experience, Rabel J. Burdge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1909-1916.

Planning Water Supply and Sanitation Projects in Developing Countries, Suley A. Muyibi, WR July/Aug. 92, p351-355.

Politics and Engineering, Robert P. Cannon, CE Dec. 91, p69-70.

p69-70.
Socioeconomic Accounting in Construction, Amir Tavakoli, Robert G. Ashmun and Cynthia S. Collyard, El Apr. 92, p136-165.
The Socio-Economic Impact Assessment for Nuclear Fuel Waste Disposal—Meeting the Challenges of the Canadian Environmental Review Process, J. Tamm and T. Wlodarczyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1777-1785.
Space Education Day, D. O. Swint, M. E. McGuinness, W. R. Sharp, S. K. Swint, J. T. Curry, B. D. Bryant, L. A. Willar and S. Solari, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160.

Towards Earning Public Trust and Confidence Through Accountability, Allen Benson, William Morgan and Deirdre Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1917-1920.

ment Program Committee, 1992), p1917-1920.

Pablic polky
Gaifornia's Tradable Emissions Policy and Greenhouse
Gas Control, John P. Dwyer, EY Aug. 92, p59-76.
Can Civil Engineers Make the Difference by Involvement
in the Political Process? Karen S. Irion, El Oct. 89,
p441-445.

A Comprehensive Approach to Container Terminal Planning: Striking a Balance, William D. Friedman, (Ports
92, David Torseth, ed., 1992), p29-42.

Critical Public Issues for Well Head Protection, Daniel J.
Van Abs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Sohulions, Mohammad Karamouz, ed., 1992), p24-279.

Lessons Not Learned from 1989 Loma Prieta Earthquake, Ghassan Tarakji, El Apr. 92, p132-138.

kisky Business: Can We Believe Port Risk Assessments
John R. Harrald, Thomas A. Mazzuchi and Christopher M. Stone, (Ports '92, David Torseth, ed., 1992),
p657-669.

p657-669.
The Socio-Economic Impact Assessment for Nuclear Fuel Waste Disposal—Meeting the Challenges of the Canadian Environmental Review Process, J. Tamm and T. Wlodarczyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1777-1785.

Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chilcote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p1-14.

Paul Chilcote and Paul Sorensen, (Ports '92, 'David Torseth, ed., 1992), pl-14.

Pablic safety
Public Attitudes About Radioactive Waste, Ann S. Bisconti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl-3.

Public-Safety Issues in Collapse of L'Ambiance Plaza, Frank J. Heger, CF May 91, p92-112.

Radiological Protection Criteria for Solid Radioactive Waste Disposal, J. R. Cooper, I. M. Barraclough and S. F. Mobbs, (High Level Radioactive Waste Management Program Committee, 1992), p237-242.

Releases From Exotic Waste Packages from Partitioning and Transmutation, William W.-L. Lee and Jor-Shan Choi, (High Level Radioactive Waste Management Program Committee, 1992), p91387-1396.

The Role of Performance Assessment in Validation, Regulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Migh Level Radioactive Waste Management, Floramittee, 1992), p99-101.

A Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p25-32.

Towards Confidence in Transport Safety: Demonstrating an Extraordinary Safety Program, R. W. Robison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Floram Committee, 1992), p1921-1926.

mittee, 1992), p1921-1926.

The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, Nona F. Shepard and Donald L. Cham-pagne, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p593-599.

Accessibility of Public Services in Irbid, Jordan, Khaled Al-Sahili and Mohammad Aboul-Ella, UP Mar. 92,

Public transportation
Accessibility of Public Services in Irbid, Jordan, Khaled
Al-Sahili and Mohammad Aboul-Ella, UP Mar. 92, p1-12.

p1-12. Arizona's Metropolitan Travel Reduction Programs, Elizabeth K. Burns, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p76-84.
The Clean Air Act: Opportunities for the Transit Industry, Sarah Siwek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-75.

Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.

The Last Freeway, Jack Hallin, CE May 92, p60-63.

Major Public Transportation Investments as "Development Projects": Old Colony Railroad, Mary P. McShane, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p138-142.

Public welfare It's Back to School for Engineers, CE Apr. 92, p10. Regulators: Don't Overlook Public Interest (ltr), Stephen D. Hill, CE Sept. 92, p37.

Public works
Accessibility of Public Services in Irbid, Jordan, Khaled
Al-Sahili and Mohammad Aboul-Ella, UP Mar. 92,

Can Civil Engineers Make the Difference by Involvement in the Political Process? Karen S. Irion, El Oct. 89, p441-445.

p441-445.

Civil Engineers Shaping Society: Our Social Responsibities, Dennis A. Randolph, El Jan. 92, p10-15.

Design Criteria and Specifications for Pipeline Rehabilitation Projects, Lawrence I. Erdos, (Water Resources Planning and Managemens: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p742-747.

Design-Build Goes Public, James Denning, CE July 92, P1098 Kong Port Engilistic Alice.

Hong Kong Port Facilities, Airport, and Housing Require New Concepts, C. K. Chow, El Oct. 92, p403-414. Impact Fees: Practical Guide for Calculation and Imple-mentation, Dennis H. Ross and Scott Ian Thorpe, UP Sept. 92, p106-118.

Sept. 92, p106-118.
Keeping the Public in Public Works Facility Planning, Margaret B. Umphres, Flias Stevenson, Sara M. Katz and Robin Spear, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p238-243.
Levels of Service Applied to Urban Streams, H. Rooney Malcom and Cynthia C. Lancaster, WR July/Aug. 91,

Many Engineering Issues and Challenges Met in Development of Hong Kong, C. K. Chow, El Jan. 92, p60-70.

A New Fast Track for Public Works, Bill Hirsh, CE Feb. 92, p45-47.

92, p45-47.

Pablishing

ASCE Review and Publication Process for Technical Journals, Otto J. Helweg and William W-G. Yeh, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p3-7. How to Improve Writing Skills, Otto J. Helweg, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p13-18.

Plain Engineering: Philosophical and Ethical View, Steven S. Crider, El Apr. 90, p148-155.

What Makes a Quality Paper? James A. Liggett, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p8-12.

Puerto Rico

Paerto IGO
Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p605-610.

Pull-out resistance
Determination of Interfacial Shear and Normal Stresses
in Fiber Pull-Out, Vistasp M. Karbhari, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p1004-1007.
Factors Influencing Passive Pullout Resistance, Joon-Ik
Sohn, Soo-Il Kim, Young-Jin Kim and Dong-Deok
Yoon, (Grouting, Soil Improvement and Geosynthetics,
Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p1153-1162.
Fiber Pullout and Bond Slip, I: Analytical Study, Antoine
E. Naaman, George G. Namur, Jamil M. Alwan and
Husam S. Najim, ST Sept. 91, p2769-2790.
Fracture Toughness for Steel Fiber-Cement Paste Interfacial Zone, Mitsunori Kawamura and Shin-ichi Igarashi,
MT Aug. 22, p227-239.

MT Aug. 22, p.272-239.

WI Systems, Roman D. Hryciw and Masyhur Irsyam, GT June 52, p.902-919.

Pullout Testing of High-Strength Concrete Members, Ronald L. Dilly and Michael Abshire, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p194-205.

Pullout Tests Using Steel Grid Reinforcements with Low-Quality Backfill, Dennes T. Bergado, Kam-Hung Lo, Jin-Chun Chai, Ramaiah Shivashankar, Marolo C. Alfaro and Loren R. Anderson, GT July 92, p1047-

Simulated Field Trials of Non-Destructive Concrete Test Methods for Highway Structures, John A. Bickley and Paul Read, (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p162-170.

# Pulse generators

Homopolar Pulse Butt Welding of API 5L Line Pipe, Paul W. Haase, Zwy Eliezer, Robert Carnes, John Gully and Mike Harville, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p813-827.

Full Scale Tests on Concentrically Loaded Fiber-Reinforced Pultruded Columns, D. W. Scott, S. J. Yoon and A. Zureick, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576.

Short-Term Behavior of Pultruded Fiber-Reinforced Plastic Frame, Ayman S. Mosallam and Lawrence C. Bank, ST July 92, p1937-1954.

Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.

Vortex Suppression in Wet-Pit Pump Intakes, Tatsuaki Nakato, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p478-481.

Effect of Thickness Distribution on Performance of S-Cambered Profiles, Baby Chacko, V. Balabaskaran, E. G. Tulapurkara and P. A. Aswathanarayana, EY Dec. 92, p164-179.

# Pumped storage

The OCEA Awards of Merit, Teresa Austin, CE July 92, p50-53.

January S. D. Effects of Incipient Fluidization of Fine Sands in Unbounded Domains, Gerard P. Lennon, William MacNair, Richard N. Weisman and Jeffrey Lindley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p654-659.

G. Buowinis, Co., 1752, p. 03-053.
Analysis of Soil-Air Permeability and Saturated Hydraulic Conductivity for Remedial System Design, Hamid G. Bojd and B. V. Nanjundeswar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p321-326.

Application of Monthly Model of Los Angeles Aqueduct System to Investigate Impacts from Mono Lake Tribu-tary Diversions, Russ T. Brown and William R. Hutchison, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1042-1048.

Geomechanics of Subsidence Due to Pumping of Groundwater, Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1-26.

Integrated Remediation of Soil and Groundwater, Russell S. Dykes and Arlin C. Howles, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p244-249.

Intra Vena Cava Balloon Pumping, Tin-Kan Hung, Thomas E. Natan, Hua-qiang Li, Frank R. Walters and Brack G. Hattler, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p709-712.

Optimal Pump Scheduling in Water-Supply Networks, Paul W. Jowitt and George Germanopoulos, WR July/ Aug. 92, p406-422.

Reduced Recharge Capacity of a Pump and Treat System, Cynthia L. Teeter, Douglas Gunnison, Norman R. Francingues, Jr. and Mark E. Zappi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1197-1203.

Scheduling of Ground Water Pumpage in Alluvial Aquifers to Minimize the Impact on Surface Water Diversions, John C. Tracy and Munjed Al-Sharif, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p79-83.

433

Pauning stations
The Application of UNET to a Complex Channel Network, Marc C. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 148-1153.
Automated Operation of Pumping Stations in Russia, Yuri A. Ermolin and Leonid I. Zats, IR July/Aug. 92, p555-563.

p353-563. Energy Efficient Pump Station Operation with a Pump Switching Constraint, Kofi Awumah and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p604-609. Turning on the Waterworks, Donald E. Eckmann, CE Aug. 92, p48-51.

Pumps
Computer Modeling of Forced Mixing in Waste Storage
Tanks, L. L. Eyler and T. E. Michener, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
232 429

po30-042.

Inverse Problems in Biomechanics, Utpal Roy and Gautam Ray, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p980-983.

A Multiple Disk Centrifugal Pump as an Artifical Ventricle, Gerald E. Miller and Amrita Sidhu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p976-979.

Uplift Capacity of Z-Purlins, Roger A. LaBoube, ST Apr. 91, p1159-1166.

### Pyrolysis

Pyrolysis Analysis of Two Lunar Oxygen Production Processes, Laura Hernandez and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p576-585.
Space Habitat Contaminant Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1370-1378.

Chandratic forms
Regularization Methods for Identification of Structural
Damage, H. G. Natke and J. T. P. Yao, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p676-680.

Quadratic formulas
Conversion Between Quadratic and Power Law for Non-Darcy Flow, G. H. George and D. Hansen, HY May 92, p792-797.

p792-797.

Quadratic programming
Elastic Analysis of Submarine Pipelines, Poon-Hwei
Chuang and David Lloyd Smith, ST Jan. 92, p90-107.

Frictionless Contact with BEM Using Quadratic Programming, Srdan Simunović and Sunil Saigal, EM
Sept. 92, p1876-1891.

Reliability-Based Optimization Using Sequential Quadratic Programming, Sankaran Mahadevan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p543-546.

Structural Optimization in a Distributed Computing Environment, B. K. Voon and M. A. Austin, (Computing
in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R.

Wright, ed., 1992), p778-785.

Chalifications

### alification

Qualifications Not a Matter of Degrees (ltr), Wilson V. Binger, CE Jan. 92, p28.

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Quality assurance Causes of Quality Deviations in Design and Construc-tion, James L. Burati, Jr., Jodi J. Farrington and Wil-liam B. Ledbetter, CO Mar. 92, p34-49. Civil Engineering Education in Ecuador, Oswald Ren-don-Herrero and Joseph H. Sherrard, El Oct. 92,

p415-419.

p413-419. Constructability Programs: White Paper, The Construction Management Committee of the ASCE Construction Division, CO Mar. 91, p67-89. Customer Requirements in Industrialized Housing, Robert L. Armacost, Paul J. Componation, Michael A. Mullens and William W. Swart, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992),

ps. 18-57.

Estimation of Chemical Grout Void Filling by Electrical Resistivity, Hideo Komine, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.372-383.

HLW Immobilization in Glass: Industrial Operation and Product Quality, P. Leroy, N. Jacquet-Francilion and S. Runge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.566-573.

Management's Fatal Flaw: TOM Obstacle, William M. Hayden, Jr., ME Apr. 92, p.122-129.

Owner Involvement in Construction Projects in Saud Arabia, Abdulaziz A. Al-Musaid, ME Apr. 92, p.176-185.

Potential Gains Through Welded-Wire Fabric Reinforcement, Leonhard E. Bernold and Peter Chang, CO June 92, p.244-257.

Quality Assurance at a High Level Waste Plant—The

ment, Leonhard E. Bernold and Peter Chang, CO June 92, p.244-257.

Quality Assurance at a High Level Waste Plant—The Successful Approval of WVP, Sellafield to BS5882/ ISO9002, Tim Houghton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), p562-565.

Quality Assurance in a Cask Fleet Parts Control System, Charles Fernandez, P. N. McCreery and L. B. Shappert, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1343-1348.

Quality Management Organizations and Techniques, James L. Burati, Jr., Michael F. Matthews and Satyanarayana N. Kalidindi, CO Mar. 92, p112-128.

Value-Added QA Within the High-Level Radioactive Waste Panagement, High Level Radioactive Waste Management Program Committee, 1992), p1303-1309.

Quality control

Quality control

Alternative Airfield Pavement Quality Control, Raymond P. Rawe and Terry A. Ruhl, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p109-123.

Compaction Grout, 1992, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p275-287.

Compaction of Granular Soils—Remarks on Quality Control, Michele Jamiolkowski and Erio Pasqualini, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p902-914.

1992), p902-914.
Compaction Quality Control in Granular Shell of Earth Dam, Panaghiotis C. Kotzias and Aris C. Stamatopoulos, GT Aug. 92, p1247-1255.
"Compression Planning" for Continuous Improvement in Quality Programs, Yolanda A. Willis and Frank C. Hood, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1287-1297.
Consistency and Fairness in Geotextile Specifications C.

Committee, 1992, p1287-1297.
Consistency and Fairness in Geotextile Specifications, C. Joel Sprague and Marshall Gaddy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p288-298.
Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

Mail. 74, pl. 72.
Mail. 74, pl. 74.
Controlling CADD Quality, CC Sept. 92, pl. 1, 13.
Corrosion Cracking in Relation to Bar Diameter, Cover, and Concrete Quality, Rasheeduzzafar, S. A. Saadoun and A. S. Al-Gahtani, MT Nov. 92, p. 327-342.

Cost and Quality Management, Richard Duttenhoeffer, ME Apr. 92, p167-175.

ME Apr. 24, p10-11-2.
Durability of Armor Stone for Rubble Mound Structures
Orville T. Magoon and W. F. Baird, (Durability of
Stone for Rubble Mound Breakwaters, Orville T
Magoon, ed. and William F. Baird, ed., 1992), p3-4.

Four Propositions for Quality Management of Design Organizations, Donald H. Kline and Gregory B. Coleman, ME Jan. 92, p15-26.

Ground Anchorage Technology—A Forward Look, Stuart Littlejohn, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p39-62.

In-Service Durability Evaluation of Armourstone, John-Paul Latham, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p6-18.

Laboratory Testing of Stone for Rubble Mound Break-waters: An Evaluation, David A. Lienhart, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p19-33. Learning to Love NDT, Bernard H. Hertlein, CE Jan. 92, p48-50.

Methods to Estimate Composition of Jet Grout Bodies, L. Joseph Kauschinger, Rachid Hankour and E. B. Perry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p194-205.

A New Technique for Quality Control of Dynamic Com-paction, Chaim J. Poran, King-Sen Heh and Jorge A. Rodriguez, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p915-926.

Owner Involvement in Construction Projects in Saudi Arabia, Abdulaziz A. Bubshait and Abdulaziz A. Al-Musaid, ME Apr. 92, p176-185.

Problems With Armor-Stone Quality on Lakes Michigan, Huron, and Erie, Richard J. Lutton and Ronald L. Er-ickson, (Durability of Stone for Rubble Mound Break-waters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p115-136.

Project Management: Keys to Success, David Bentley and Gary Rafferty, CE Apr. 92, p58-59.

Public-Safety Issues in Collapse of L'Ambiance Plaza, Frank J. Heger, CF May 91, p92-112. Realistic Specifications for Steel Bridge Painting, Luh-Maan Chang and Machine Hsie, (Materials: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p299-310.

Recent Experience With Armor Stone Cracking in the Buffalo District, David W. Marcus, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p222-237. Reliability Model for Soil Liner: Post Construction, I. Bogardi, W. E. Kelly and A. Bardossy, GT Oct. 90,

gardi, W. E p1502-1520.

Site Improvement for a Steel Mill Complex, Eun C. Shin, Bang W. Shin and Braja M. Das, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-

Some Case Histories of Armor Stone Production, Mel Hill, (Durability of Stone for Rubble Mound Breakwat-ers, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p212-221.

Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), pl 298-1302.

U.S. Experience With Armor-Stone Quality and Performance, Richard J. Lutton, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p40-59.

Quality control - management ADR, TQM, Partnering, and Other Management Fanta-sies, F. H. "Bud" Griffis, El Oct. 92, p331-344.

Implementation of TQM in Building Design and Construction, Gerald W. Chase and Mark O. Federle, ME Oct. 92, p329-339.

Opportunities and Constraints for the Innovative Geo-technical Contractor, Peter J. Nicholson and Donald A. Bruce, (Excavation and Support for the Urban Infra-structure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p46-64.

Quantitative analysis
The General Theory of Quantitative Risk Assessment,
Stan Kaplan, (Risk-Based Decision Making in Water
Resources V, Yacov V, Haimes, ed., David A. Moser,
ed. and Eugene Z. Stakhiv, ed., 1992b, p11-19.
Quantitative Risk Assessment and Technology Transfer:
Software Developments, Charles Yoe, (Risk-Based Decision Making in Water Resources V, Yacov Y.
Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p92-107.

khiv, ed., 1992), p92-107.

Quarries

Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992, 0-87262-863-9, 288p.

Dust Controller Keeps it Down, CE Aug. 92, p77.

Pricing Armor Rock for Rubble Mound Breakwaters, R. A. Everist, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p160-169.

Problems With Armor-Stone Quality on Lakes Michigan, Huron, and Erie, Richard J. Lutton and Ronald L. Erickson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p115-136.

Producing Armourstone Within Aggregate Quarries, Huanjin Wang, John-Paul Latham and Alan B. Poole, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p200-210. p200-210.

Quarry Inspection: A Geological Perspective, Gary J. D'Urso, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p185-199.

ed., 1992), p185-199.
Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, Kevin R. Stank and James W. Knox, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and Wiliam F. Baird, ed., 1992), p95-114.
Some Case Histories of Armor Stone Production, Mel Hill, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p212-221.

ers, Orville T. M 1992), p212-221.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Gracings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), 964-81.

Duarrying
Suarry Techniques for Dimensional Breakwater Stone,
Stephen N. Stehlik, R. D. Knisely and C. L. Kramer,
(Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p170-184.

processionalies

passidonalies

jummary of Responses to Participant Questionnaire,

Fifth Engineering Foundation Conference on Risk
Based Decisionmaking in Water Resources, (Risk
Based Decision Making in Water Resources V, Yacov

Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Sta
khiv, ed., 1992), p360-371.

khiv, ed., 1992), p360-371.

Queueing
Analyzing Fast-Food Drive-Up Window Site Impacts, J.
L. Gattis, N. Zaman, G. W. Tauxe and R. S. Marshment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20.

Conflict of Interest in Deep-Draft Anchorage Usage—Application of QT, Jan A. Berg-Andreassen and Adam K. Prokopowicz, WW Jan./Feb. 92, p75-86.

Container Terminal Gates Flexible Design for a Dynamic Environment, Larry Nye. (Ports '92, David Torseth, ed., 1992), p912-925.

Ship-Berth Link as Bulk Queueing System in Ports, Zoran R. Radmilovich, WW Sept./Oct. 92, p474-495.

Tests on the Application of CAN-Q to Construction Process Modeling, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p199-206.

Importance of the Tropical Rainfall Measuring Mission (TRMM) Satellite to Hydrological Investigations, Joanne Simpson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p523-528.

Infrared Thermographic Sensing of Sewer Pipeline Prob-lems, Gary J. Weil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992).

Non-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 121-1128.

Structural Design of Lunar Radio Telescope Using Inter-active CAD, Ferhat Akgul, Walter H. Gerstle and Stew-art W. Johnson, AS Jan. 92, p12-23.

### Radiation

Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. L. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561.

Conceptual Design of a Monitored Retrievable Storage Cask Employing Yucca Mountain Containers, C. Erwin, D. R. Jackson, J. R. Oliver, M. S. Aljohani and D. B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2235-2240.

Constructing Radiation Shields with Textiles for Lunar Applications, J. Lewis Dorrity and James W. Brazell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-377.

A Context for Understanding the Significance of Radia-tion Exposures from the MRS, Dan Kane, Ricardo Palabrica and Christine Van Lenten, (High Level Radi-oactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1938-1945.

Criticality Safety of TRU Storage Arrays at the Waste Ico-lation Pilot Plant, William A. Boyd and Mark W. Feo-teau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2069-2077.

Docision Management for the Hanford Environmental Dose Reconstruction Project, William J. Roberds, H. A. (Walt) Haerer and Detlof von Winterfeldt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1743-1750.

Estimation of Daytime Net Radiation Over Well-Watered Grass, A. Dong, S. R. Grattan, J. J. Carroll and C. R. K. Prashar, IR May/June 92, p466-479.

Experimental Characterization of Jet Forces on Waste Tank Components, Judith Ann Bamberger, James M. Bates and E. Dale Waters, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p628-635.

Interpolation Functions for Use with ORIGEN-2 Data, R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p77-81.

Metallized Microballoon EMI Shielding Materials, Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.

Near-Field Radiation Doses from Transported Spent Nu-clear Fuel, R. F. Weiner and K. S. Neuhauser, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1205-1208.

An ORIGEN2 Update for PCs and Mainframes, Scott B. Ludwig, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

nmittee, 1992), p93-98.

Overview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Ikenberry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204.

436

p1711-1717.

Radiation Energy Treatment of Water, Wastewater and Sludge: A State-of-the-Art Report, Task Committee on Radiation Energy Treatment, Air and Radiation Management Committee, Environmental Engineering Division, (Paul Kruger, chmn.), 1992, 0-87262-901-5, 52pp.

Radiation Measurements for Verifying the Loading of Burnup Credit Casks, Ronald I. Ewing, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992). p2161-2164.

Radiological Environmental Monitoring for the Yucca Mountain Site, K. J. Shenk, J. K. Prince and C. D. Sorensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2313-2317.

Radiological Protection Criteria for Solid Radioactive Waste Disposal, J. R. Cooper, I. M. Barraclough and S. F. Mobbs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p237-242.

The Role of Performance Assessment in Validation, Reg-ulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p99-101.

mittee, 1992), p99-101.
Safety Analysis for Waste Transports to the Planned Final
Waste Repository KONRAD, F. Lange, D. Gründler
and G. Schwarz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), p421-426.
Shielding and Criticality at the MRS Facility, Kenneth L.
Ashe, Robert G. Eble and James R. Hilley, Jr., (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p2036-2061.
A Simple Method to Commute Wave Loads on a TIP

A Simple Method to Compute Wave Loads on a TLP, Moo-Hyun Kim, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p158-172.

Synchrotron Radiation Measurements of Degree of Saturation in Porous Matrix, Scott A. Wells and Richard I. Dick, EM Aug. 92, p1738-1744.

Technological Parameters of Underground Facilities for Long-Term Storage of High-Temperature Sources, O. L. Kedrovsky, I. Y. Shishchits and V. N. Vorobjev, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2410-2414.

Torsional Radiation Damping of Arbitrarily Shaped Em-bedded Foundations, Shahid Ahmad and George Gaze-tas, GT Aug. 92, p1186-1199.

Understanding the Medical Applications of Radionu-clides, Darrell W. McIndoe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1478-1484.

Vising the ORIGEN2 Computer Code for Near Core Activation Calculations, A. T. Luksic and B. D. Reid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p82-87.

### Radioactive materials

Achievements Within the International INTRAVAL Project, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1414-1420.

Actinide Recycle and Waste Management, Marion L. Thompson and Ira N. Taylor, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1368-1372.

ALWP-67: A Little-Known Big Nuclear Accident, N. G. Botov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2331-2338.

Can the Kristallin-I Near-Field Model be Considered Ro-bust? I. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1770-1776.

Characterization of the Topopah Spring and Tiva Canyon Tuffs at Yucca Mountain, Ajeet Singh, Shamsuddin Ilias and Gary Tatterson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1953-1958. A Comparison of Radionuclide Inventories Between the Direct-Disposal and the Acinide-Burning Cycles, Jor-Shan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1381-1386.

Data Bases About the Transportation of Radioactive Ma-terials, Cheryl Cashwell and James D. McClure, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

dioactive Waste Management Program Committee, 1992), p427-431.

Demands Placed on Waste Package Performance Testing and Modeling by Some General Results of Reliability Analysis, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p994-1002.

Deterministic and Probabilistic Performance Assessment Methods Applied to Radionuclide Migration Through Fractured Geologic Medium, A. B. Gureghian, Y.-T. Wu and B. Sagar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p985-993.

Diffusion of Carbon Dioxide and Iodine Through Yucca

Program Committee, 1992), p985-993.

Diffusion of Carbon Dioxide and Iodine Through Yucca Mountain Tuffs—Effects of Temperature and Moisture Content, Tevfik Bardakci, Franklin G. King and Ajeet Singh, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1946-1952.

Diffusion of Radionuclides in Compacted Bentonite, Jong-Won Choi, Choong-Hwan Jung, Kwan-Sik Chun, Hyun-Soo Park, Joo-Ho Whang and Byung-Hun Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p2278-2283.

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, John L. Smoot, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p345-351.

Effect of Solid-Phase Selectivity on Sorption of Cobalt

p1587-1592.

Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, K. J. Riggle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2323-2330.

Estimating the Consequences of Significant Fracture Flow at Yucca Mountain, John H. Gauthier, Michael L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p891-898.

p891-898.

Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, Kanwar Raj, M. S. Kumra and A. N. Prasad, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p899-903.

Flow and Transport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, In Che Yang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p732-737.

The High Level Radioactive Waste Management Program

The High Level Radioactive Waste Management Program in Japan, Aiji Yamato, Sumio Masuda and Hideki Sakuma, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p41-48.

Lonmuttee, 19921, p41-48. Integrated Performance Assessment Model for Waste Package Behavior and Radionuclide Release, Richard Kossik, Ian Miller and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1786-1793.

Method to Inhibit Technetium Migration in a Geologic Repository, VirLynda Statler and William H. Ellis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1985-1990.

A Microcomputer-Based Model for Identifying Urban and Suburban Roadways with Critical Large Truck Accident Rates, J. D. Brogan and J. W. Cashwell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1902), 432,4346 1992), p432-436.

Modelling the Effect of Atmospheric Emissions on Groundwater Composition, Theresa J. Brown, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2318-2322.

Models for Calculating Radionuclide Release from the Near Field, L. Romero, L. Nilson, L. Moreno and I. Neretnieks, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1922, p954-993.

New Technique to Evaluate the Surface Degradation of Cementaneous Matrix, Takayuki Amaya and Kazunori Suzuki, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1670-1675.

On the Particle Size Distribution of Crushed Spent Fuel, P. C. Reardon, Y. R. Rashid and G. S. Brown, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p137-142.

An Overview of Partitioning-Transmutation, Allen G. Croff and Gordon E. Michaels, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1359-1367.

Overview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Ikenberry, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204.

Partitioning and Transmutation of Long-Lived Fission Products, J. A. Rawlins, D. W. Wootan, R. A. Karnesky, F. M. Mann and W. W. Schulz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1711-1717

Partitioning of Aqueous High-Level Wastes: State-of-the-Art Technology, Wallace W. Schulz, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p1718-1723.

Plutonium in Uranium Deposits: Natural Analogues of Geologic Repositories for Plutonium-Bearing Nuclear Wastes, David Curtis, June Fabryka-Martin, Ruben Aguilar, Moses Attrep, Jr. and Fred Roensch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p338-344.

Quantitative Comparison Between Colloidal and Solute Transport, J. Y. Chung and K. J. Lee, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1966-1971.

Minerals in Heated and Unheated Tuff at the Nevada Test Site, S. Flesser and H. A. Wollenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), a1603-1603. p1593-1598.

Releases From Exotic Waste Packages from Partitioning and Transmutation, William W.-L. Lee and Jor-Shan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1387-1396.

The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1429-1436.

Source-Term Calculations for a Total Systems Analysis, David W. Engel, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p1758-1764.

Supervision and Automatic Control of Robotic Systems in Nuclear Environments, J. Benner and K. Leinemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p966-973.

Theory of Chaos and Radionuclide Distribution, E. A. Yfantis, G. Miel and G. M. Gallitano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2339-2343.

Understanding the Medical Applications of Radionu-clides, Darrell W. McIndoe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 478-1484.

Uranyl Oxide Hydrates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, R. J. Finch and R. C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 232 323 p332-337

Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p1196-1199

Using the ORIGEN2 Computer Code for Near Core Activation Calculations, A. T. Luksic and B. D. Reid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p82-87.

Utilization of ORIGEN2 by the Characteristics Data Base, Tim D. Welch and Karl J. Notz, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-

Validation of Safety Assessment Models as a Process of Scientific and Public Confidence Building, Shlomo P. Neuman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 404-1413.

Radioactive tracers

3H and 14C as Tracers of Ground-Water Recharge, John
A. Izbicki, Robert L. Michel and Peter Martin, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p122-127.

Radioactive waste disposal

Accounting for Uncertainty in Natural Systems, Milton E. Harr, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1612-1616.

Achievements Within the International INTRAVAL Project, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1414-1420.

Alternative Cask Maintenance Facility Concepts, an Update and Reassessment, C. R. Attaway, L. G. Medley, R. B. Pope, L. B. Shappert and A. C. Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992) a124-1242. 1992), p1336-1342.

An Analysis of Contingencies for Making Casks Available for Use During the Early Years of Federal Waste Management System Operations, P. E. Johnson, D. S. Joy, R. B. Pope, L. B. Shappert, M. W. Wankerl, R. E. Best, F. L. Danese and S. Schmid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1310-1316.

Analysis of Uncertainty in Geotechnical Site Investiga-tions, and Why, Milton E. Harr, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Waste M p755-758.

p.153-138. Application of a Probabilistic System-Model Based Methodology for the Performance Assessment of Deep Underground Disposal of Nuclear Wastes, T. J. Sumerling and B. G. J. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1647-1657.

Application of Performance Assessment as a Tool for Guiding Project Work, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2126-2135.

ssessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. L. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

A Bayesian Reliability Approach to the Performance Assessment of a Geological Waste Repository, John A. Fluck and Ashok K. Singh, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1625-1632.

Management Program Committee, 1992), p1625-1632.
Benefits of International Technical Collaboration, Thomas H. Issacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32.
Can the Kristallin-I Near-Field Model be Considered Robust? I. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1770-1776.
Canadian High-Level Radioactive Waste Management

Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1770-1776.

Canadian High-Level Radioactive Waste Management System Issues, C. J. Allan, B. R. Gray and P. D. Stevens-Guille, (High Level Radioactive Waste Management Program Committee, 1992), p11-17.

Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561.

Combined Natural Convection and Surface Radiation in the Annular Region Between a Volumetrically Heated Inner Tube and a Finite Conducting Outer Tube, S. E. Gianoulakis and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), p805-812.

A Comparison of a New Generation of Spent Fuel Cask Designs with Current Cask Design Characteristics, William H. Lake, (High Level Radioactive Waste Management Program Committee, 1992), p1839-1843.

A Comparison of Radioactive Waste Management Program Committee, 1992), p1839-1843.

Comparison of Radioactive Waste Management Program Committee, 1992), p181-1386.

Comparison of Radioactive Waste Management Program Committee, 1992), p181-1386.

Computer Modeling of Forced Mixing in Waste Storage Tanks, L. Leyler and T. E. Michener, (High Level Radioactive Waste Management Program Committee, 1992), p1287-1297.

Computer Modeling of Forced Mixing in Waste Storage Tanks, L. Leyler and T. E. Michener, (High Level Radioactive Waste Management Program Committee, 1992), p1846-642.

Conservative Tracers for the C-Well Hydraulic Testing, Tonya Dombrowski, Gary Coates and Klaus J. Stetzen-

p636-642.
Conservative Tracers for the C-Well Hydraulic Testing,
Tonya Dombrowski, Gary Coates and Klaus J. Stetzenbach, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p1991-1996.
Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, E. Smailos and R. Köster, (High Level
Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),
p1676-1680.

p1676-1680.

Ive Waste Management Program Continues, 1972), p1676-1680.

Current Perspectives on Performance Assessment at the NRC, S. M. Coplan, N. A. Eisenberg, M. V. Federline and John D. Randall, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2145-2150.

Densification/Creep Behavior of Experimental Glass-Ceramic Waste Forms for Immobilization of High-Level Calcined Waste at the Idaho Chemical Processing Plant, Krishna Vinjamuri, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p300-303.

Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, C. S. Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271.

Despite Study, Questions Surround Yucca Mountain, CE.

Despite Study, Questions Surround Yucca Mountain, CE July 92, p14,16.

Developing Conceptual Models for Performance Assessment of Waste Management Sites, Felicia A. Kerl, A. Sharif Heger and David P. Gallegos, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 6502-6502.

Development of a Demonstration Program for a Dry Cask-to-Cask Transfer System with Dual Purpose Casks, Rita W. Bowser and Robert E. Jones, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

438

dioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p2212-2218.

Development of Radioactive Waste Management Licensing Review Assistant, Wei-Whua Loa, Suan Chen, Wei-Chu Yu, Chao-Ming Pong, Ching-Lun Huang and Chen Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p243-249.

Diffusion of Radionuclides in Compacted Bentonite, Jong-Won Choi, Choong-Hwan Jung, Kwan-Sik Chun, Hyun-Soo Park, Joo-Ho Whang and Byung-Hun Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Committee, 1992), p343-351.

Disposal of Failed Melters from Defense Waste Vitrification Facilities, P. J. Brackenbury, J. King and E. C. Norman, (High Level Radioactive Waste Management, Committee, 1992), p2381-2386.

The DOE Office of Environmental Restoration and Waste Management Comprehensive Integrated Planning Process, Richard J. Alken, Cyril W. Draffin, Jr. and Karl T. Pflock, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2581-558.

Ecological Sustainable Development—A Place in the Sun for Nuclear Energy? Carole Palmer, (High Level Radioactive Waste Management Program Committee, 1992), p1470-1477.

Economic Impact of Nuclear Facilities, Eric Knox and Scott Burnisson, (High Level Radioactive Waste Management Program Committee, 1992), p1470-1477.

p1470-1477.

Economic Impact of Nuclear Facilities, Eric Knox and Scott Burmison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p949-953.

Effect of Water on the Consolidation of Crushed Rock Salt, M. L. Wang, S. K. Miao, A. K. Maij and C. L. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p531-534.

Engineered Barrier System Failure Modeling. A Statistical Approach, Daniel B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p401-408.

tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p401-408.

Enhancing the Partnership—Improving Public Awareness Through Education and Information, Carol L. Hanlon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1794-1798.

Environmental Amenities and the Location of Industrial Activity, Tim Allison and Frank Calzonetti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992). p875-592.

1992), p587-592.

dioactive Waste Management Program Committee, 1992), p587-592.

Environmental Aspects of Lunar Helium-3 Mining, G. L. Kulcinski, E. N. Cameron, W. D. Carrier, III. and H. H. (Jack) Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p606-616.

Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 191 to Other Wastes, Neil J. Numark and Suzanne R. Phelps, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1074-1081.

An Evaluation of Early Application of the Transuranic Burning Concept, E. Rodwell, R. A. Shaw and R. F. Williams, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, An Evaluation of the Proposed Tests with Radioactive Waste at WIPP, Lokesh Chaturvedi and Matthew Silva, (High Level Radioactive Waste Management, Program Committee, 1992), p600-609.

Evolution of the French Policy Related to the Studies on Long-Lived Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p49-51.

Experience With an Educational Package on Radioactive Waste Management in a Country Having no Nuclear Power Programme, P. Krejsa and G. Ehrenstrasser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1491-1493.

Experimental Characterization of Jet Forces on Waste Tank Components, Judith Ann Bamberger, James M. Bates and E. Dale Waters, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p628–635.

Fault Stress Analysis for the Yucca Mountain Site Char-acterization Project, S. J. Bauer, M. P. Hardy, R. Goo-drich and M. Lin, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277.

Field Measurements of Tracer Gas Transport Induced by Barometric Pumping, R. H. Nilson, W. B. McKinnis, P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p710-716.

A Forecasting Model of Gaming Revenues in Clark County, Nevada, B. Edwards, A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2023 248

Forecasting the Space-Time Stability of Radioactive Waste Isolation in Salt Formations, E. B. Anderson, A. I. Karelin, A. S. Krivokhatsiy and V. G. Savonenkov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2114-2121.

French High-Level Waste Management Research and Development Program, J. P. Moncouyoux and C. G. Sombret, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409.

Geological Mappability of Bored Versus Drill and Blast Excavations for Radioactive Waste Repositories, Bjorn Nilsen and Levent Ozdemir, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1499-1506.

Gravity-Driven Fingering in Unsaturated Fractures, M. J. Nicholl, R. J. Glass and H. A. Nguyen, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p321-331.

High Level Radioactive Waste Management, 2 vols., High Level Radioactive Waste Management Program Com-mittee, (James S. Tulenko, chmn.), 1992, 0-87262-891-4, 2492pp.

The High Level Radioactive Waste Management Program in Japan, Aiji Yamato, Sumio Masuda and Hideki Sakuma, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p41-48

Human Error in Complex Systems, Douglas H. Harris, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

mittee, 1992), p1527-1533.

Human Factors and System Safety in the Management of High-Level Radioactive Waste, Mary L. Lozano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1542-1546.

Human Factors Programs for High-Level Radioactive Waste Handling Systems, Daniel J. Pond, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

Impact of HLW Thermal Output on Repository Design, J. L. Girotto, L. Chaudon and J. M. Hoorelbeke, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p779-783.

The Impact of Risk Communications on Public Understanding: Combining a Survey with an Experiment, R. E. O'Connor and R. J. Bord, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p574-581.

Implementation of the Department of Energy's New American Indian Policy within the Civilian Radioactive Waste Management Program, J. Bennett Easterling and Beth Berlin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, pp.61-165.

The Implications of Episodic Nonequilibrium Fracture Matrix Flow on Site Suitability and Total System Performance, John J. Nitao, Thomas A. Buscheck and Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.279-296.

The Importance of the Site for the Safety of a Repository for Spent Nuclear Fuel in Sweden, Tonis Papp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2136-2144.

dioactive Waste Management Program Committee, 1992), p2136-2144.

In Situ Testing Program at the Waste Isolation Pilot Plant, T. M. Schultheis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1090-1091.

The Influence of Moisture on Air Oxidation of UO2: Calculations and Observations, Peter Taylor, Robert J. Lemire and Donald D. Wood, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1442-1448.

An Inside Look at the 40 CFR 191 Containment Requirements, Floyd L. Galpin, Raymond L. Clark and Caroline Petti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1047-1054.

An Integrated Approach to Strategic Planning in the Ci-

Committee, 1992), p1047-1034.
An Integrated Approach to Strategic Planning in the Civilian High-Level Radioactive Waste Management Program, William M. Sprecher, Jonathan Katz and Richard J. Redmond, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1539-1564.

ment Program Committee, 1992), pl 559-1564. Integrated Performance Assessment Model for Waste Package Behavior and Radionuclide Release, Richard Kossik, Ian Miller and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 786-1793.

pi786-1793.
Interfacing the Existing Cask Fleet with the MRS or Fitting Round Pegs into Square Holes, J. W. Doman and R. E. Hahn, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p1889-1895.
The International CHEMVAL Project: Verification and Validation of Geochemical Models, D. Read and T. W. Broyd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1421-1428.
An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Century: Beyond Engleberg, Richard R. Powell, Edwyn James and Alfred Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1494-1498.
Introductory Remarks for the International High-Level

Introductory Remarks for the International High-Level Radioactive Waste Conference Technical Session on Radioactive Waste Conference Technical Session on Site Chracterization: Approaches, Concepts, Concerns', Philip S. Justus and Jane R. Stockey, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p746-747.

Issues Related to the Transport of a Transportable Storage, P. McConnell, T. L. Sanders, L. Brimhall, J. M. Creer, E. R. Gilbert and R. H. Jones, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180.

Lessons Learned from the Performance Assessment of

mittee, 1992), pl.174-1180.

Lessons Learned from the Performance Assessment of SKI Project-90, J. Andersson, K. Andersson, S. Norrby and S. Wingefors, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2109-2113.

Licensing Code-of-Practice, Leonard T. Skoblar, [High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p.2105-2106.

1992), p1055-1061.

Licensing Issues: Clarification and Convergence, John P. Roberts, Linda J. Desell, Mary L. Birch, Lester Berkowitz and Joseph F. Bader, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236.

Management of Scientific and Engineering Data Collected During Site Characterization of a Potential High-Level Waste Repository, Claudia M. Newbury and Gail W. Heitland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2093-2097.

Managing Large Complex Projects, William B. Derrickson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1751-1757.

Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, Kenneth P. Baskin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Commission Licensing Program Com

mittee, 1992), p691-694.
Mandated Public Participation in Siting of Hazardous and Conventional Waste Facilities: The Illinois Experience, Rabel J. Burdge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1909-1916.
Mechanical Excavation of Roadways and Chambers in Hard Rock, Neil J. Dahmen and John Turner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1902), p1572-1515.

1992), p1507-1515.

Model and Calculations for Net Infiltration, Stuart W. Model and Calculations for Net Infiltration, Stuart w. Childs and Austin Long, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1633-1642. Natural Analogues: The State of Play in 1992, Neil A. Chapman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1695-1700.

gram Committee, 1992), p1695-1700.

Needed Geologic and Seismic Rulemaking for HLW Repositories, Jay L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p685-690.

New Technique to Evaluate the Surface Degradation of Cementaneous Matrix, Takayuki Amaya and Kazunori Suzuki, (High Level Radioactive Waste Management Program Committee, 1992), p1670-1675.

Numerical Modeling of Flow and Transport Phenomena in a Fractured Rock and Its Calibration Process, A. Kobayashi, R. Yamashita and Y. Moro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Floram Committee, 1992), p1695-703.

oactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p695-703.

A Numerical Study of Water Percolation through an Unsaturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, C. F. Tsang, J. Noorishad and F. V. Hale, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p304-309.

On the Particle Size Distribution of Crushed Spent Fuel, P. C. Reardon, Y. R. Rashid and G. S. Brown, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p317-142.

1992), p137-142.

1992), p13-1-14.
Overview of the Radioactive Waste Management Programme of the OECD/NEA, Jean-Pierre Olivier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p52-56.

1992, p52-56.
Paleohydrologic Implications of the Stable Isotopic Composition of Secondary Calcite Within the Tertiary Volcanic Rocks of Yucca Mountain, Nevada, Joseph F. Whelan and John S. Stuckless, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581.
A PC-Based Discrete Event Simulation Model of the Civilian Radioactive Waste Management System, G. L. Airth, J. W. Nehls and D. S. Joy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1317-1323.

Waste Man p1317-1323.

p1317-1323.

Perceived Risk Impacts from Siting Hazardous Waste Facilities, R. C. Hemphill, B. K. Edwards and G. W. Bassett, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p582-586.

Physical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SY-101, Rudolph T. Allemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p610-614.

Physical Processes and Effects of Magmatism in the Yucca Mountain Region, Greg A. Valentine, Bruce M. Crowe and Frank V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2014-2024.

management rrogram Committee, 1992, p. 2014-2024.
The Potential Application of Military Fleet Scheduling
Tools to the Federal Waste Management System Transportation System, I. G. Harrison, R. B. Pope, R. D.
Kraemer and M. R. Hilliard, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p. 1324-1329.

Potential Increases in Natural Radon Emissions Due to Heating of the Yucca Mountain Rock Mass, C. Pescatore and T. M. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1599-1606.

Preliminary Analysis of Repository Operational Criteria, John P. Hageman, Asadul H. Chowdbury and Jerome R. Pearring, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1067-1073.

gam Committee, 1992, p.100-1073.

A Preliminary Report on OCR Problems in LSS Document Conversion, T. A. Nartker, J. Kanal and S. V. Rice, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2106-2108.

Program Analysis and Compliance Management, Thomas W. Woods and Dillard B. Shipler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1724-1729.

Projected Compositions and Radiogenic Properties of DWPF Glasses, J. R. Fowler and M. J. Plodinec, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

1992), p904-910.

1992), p904-91, p904-

Public Attitudes About Radioactive Waste, Ann S. Bisconti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p1-3.

Radioelements and Their Occurrence with Secondary Minerals in Heated and Unheated Tuff at the Newada Test Site, S. Flesser and H. A. Wollenberg, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1593-1598

Radiological Protection Criteria for Solid Radioactive Waste Disposal, J. R. Cooper, I. M. Barraclough and S. F. Mobbs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p237-242.

Rail Industry Trends Related to Waste Transportation, Ruth Maddigan, Marlene Owens and Paul Shelton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1330-1335.

Records Management in Support of the Licensing Process for the High Level Radioactive Waste Facility, Dennis G. Sheats, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2083-2087.

gram Committee, 1992), p.2083-2087.
Recurrence Models of Volcanic Events: Applications to Volcanic Risk Assessment, Bruce M. Crowe, R. Picard, G. Valentine and F. V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2344-2355.

Regulatory Considerations in Design of the Exploratory Studies Facility, Michael W. Parsons and Michael D. Voegele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p671-678.

Regulatory Requirements to Address Issues Related to Volcanism and Magmatism: Code of Federal Regulations, Title 10, Part 60, Disposal of High-Level Radioactive Wastes in Geologic Repositories, John S. Trapp and Philip S. Justus, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2039-2046.

Releases From Exotic Waste Packages from Partitioning and Transmutation, William W.-L. Lee and Jor-Shan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1387-1396.

Return to Italy of Vitrified High Level Wastes from U.K.:
Operational and Regulatory Aspects, G. F. Eletti, F. P. Michetti and M. Tocci, (High Level Radioactive Waste Management Program Committee, 1992), p256-262.
Roadmaps: An Effective Issue-Based Planning Process, Cyril W. Draffin, Jr. and A. Nick Suttora, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1567-1571.
Robotics for Radioactive Waste Management in AEA

Robotics for Radioactive Waste Management in AEA Technology Facilities, S. A. Legg, A. Staples and C. J. H. Watson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p980-984.

The Role of Performance Assessment in Validation Res.

gram Committee, 1992), p980-984. The Role of Performance Assessment in Validation, Regulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p99-101. The Role of the M&O in the High-Level Civilian Radioactive Waste Management System, Roland L. (Robby) Robertson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2415-2416.

gram Committee, 1992), p2415-2416.
The Role of the Repository Implementer in Providing and Demonstrating Safe Disposal of Radioactive Wastes, C. McCombie, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p102-105.
RW-859-A Key Link Between Government and Utilities, Mary Lee Payton and Kathleen Gibbard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1281-1286.
Safety Analysis for Waste Transports to the Planned Final

1992), p1281-1286.
Safety Analysis for Waste Transports to the Planned Final Waste Repository KONRAD, F. Lange, D. Gründler and G. Schwarz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p421-426.
Semi-Analytical Treatment of Fracture/Matrix Flow in a Dual-Porosity Simulator for Unsaturated Fractured Rock Masses, R. W. Zimmerman and G. S. Bodvarson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p272-278 mittee, 1992), p272-278.

Site Characterization and the Method of Multiple Working Hypotheses, David F. Fenster, K. Michael Cline, John A. Blair and Jane Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Solubility of Uranyl in Brine, Hiromichi Yamazaki, Vas-silios Symeopoulos, Bo Lagerman and Gregory R. Choppin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1607-1611.

Committee, 1992, p1607-1611.

me Aspects Concerning the Design of High Level
Waste Vitrification and Storage Facilities, V. A. Kurnosov, M. V. Strakhov, V. T. Sorokin and A. E. Kozlov,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p2387-2394.

Spanish High Level Radioactive Waste Management Sys-tem Issues, J. M. Espejo and A. R. Beceiro, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p18-24.

pl8-24.
Start-Ups, CE May 92, p8.
Strategic Planning for Transportation Under the NWPA:
A State Perspective, Douglas Larson and Jim Miernyk,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1730-1736.

sinitee, 1992), pl.130-1736. Strontium Isotope Geochemistry of Calcite Fracture Filings in Deep Core, Yucca Mountain, Nevada—A Progress Report, Z. E. Peterman, J. S. Stuckless, B. O. Marshall, S. A. Mahan and K. Futa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1582-1586.

Swedith High-Level Radioactive Waste Management Issues, Per-Eric Ahlström, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p33-40.

Swiss High-Level Radioactive Waste Management System Issues, C. McCombie, (High Level Radioactive Waste Management Program Committee, 1992), p25-27.

Taking Account of the Biosphere in HLW Assessment, Graham M. Smith and Helen A. Grogan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2306-2312.

TBM Performance Prediction in Yucca Mountain Weld-

p2306-2312. TBM Performance Prediction in Yucca Mountain Welded Tuff From Linear Cutter Tests, Richard Gertsch, Levent Oxdemir and Leslie Gestsch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1516-1520.

pl 150-1520. Technological Parameters of Underground Facilities for Long-Term Storage of High-Temperature Sources, O. L. Kedrovsky, I. Y. Shishchits and V. N. Vorobjev, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2410-2414.

mittee, 1992), p2410-2414.

mittee, 1992), p2410-2414.

Benjamin Ross, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p784-789.

Temporal and Spatial Distribution of Basaltic Volcanism in the Pancake and Reveille Ranges North of Yucca Mountain, K. A. Foland and S. C. Bergman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2366-2371.

Throughput Study for the Civilian Padioactive Waste

Throughput Study for the Civilian Radioactive Waste Management System, Peter Gottlieb, William Bailey, III., Flora Emami, Lawrence M. Ford and John F. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1349-1358.

Towards Earning Public Trust and Confidence Through Accountability, Allen Benson, William Morgan and Deirdre Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1917-1920.

Transportation, Interim Storage, and Disposal Alterna-tive for Vitrified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

rrogram committee, 1992), pol3-ol9; Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, Kalyan K. Bhattacharyya, Richard McDonald and Robert S. Saunders, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), pl 521-1526.

Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, Paul G. Ka-plan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1643-1646.

Understanding the High-Level Radioactive Waste Program Through the Cooperative Agreement Process, L. Cheryl Runyon, Millard Peck, III. and Glenn H. Gardner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee 1002) 2152-152 mittee, 1992), p152-155.

mittee, 1992), p152-155.

Use of Annotated Outlines to Prepare Guidance for License Applications for the MRS and MGDS, John Roberts and William R. Griffin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1040-1046.

Validation, Acceptance and Licensing: How Much Scientific Facts Can the Process Digest? Clas-Otto Wene, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p110-115.

Mittee, 1992, p. 10-113.

Validation Issues Associated with Performance Assessment Modeling Activities for High-Level Radioactive Waste Repositories, Thomas J. Nicholson, Charles F. Voss and Johan Andersson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1437-1441.

Validation of Safety Assessment Models as a Process of Scientific and Public Confidence Building, Shiomo P. Neuman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1404-1413.
Value-Added QA Within the High-Level Radioactive Waste Program, Tom Colandrea, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1303-1306.

p1303-1309.

Waste Caretakers: Who Will They Be? A. Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1485-1490.

Waste Isolation Pilot Plant Robotic Investigation and Study, T. M. Schultheis and J. R. Walls, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p960-965

Radioactive waste process

Radioactive waste processing Actinide Recycle and Waste Management, Marion L Thompson and Ira N. Taylor, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1368-1372.

ne Behavior and Effects of the Noble Metals in the DWPF Melter System, Nick D. Hutson and Mike E. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p541-548.

Borosilicate Glass (a,n) Sources Used With Origen-Type Calculations, O.W. Hermann and R. Salmon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p1272-1280.

Cleanup of a HLW Nuclear Fuel Reprocessing Center Using 3-D Database Modeling Technology, Robert C. Sauer. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 859-868.

Committee, 1992I, p859-868.
Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992I, p557-561.

A Companying of Glass Beastle.

Committee, 1992), p557-561.

A Comparison of Glass Reaction at High and Low SA/V: PCT Vs. MCC-1, William L. Ebert and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p934-942.

Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, E. Smailos and R. Köster, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1676-1680.

p1676-1680.

Corrosion Resistance of Stainless Steels and High Ni-Cr Alloys to Acid Fluoride Wastes, H. D. Smith, K. H. Pool, D. B. Mackey and E. B. Schwenk, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e306.632.

p620-627.

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.

Disposal of Failed Melters from Defense Waste Vitrification Facilities, P. J. Brackenbury, J. King and E. C. Norman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2381-2386.

An Evaluation of Early Application of the Transuranic

Committee, 1992), p2381-2386.

An Evaluation of Early Application of the Transuranic Burning Concept. E. Rodwell, R. A. Shaw and R. F. Williams, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1373-1380.

Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, Kanwar Raj, M. S. Kumra and A. N. Prasad, (High Level Radioactive Waste Management Program Committee, 1992), p899-903.

Evaluations of Glass Vitrification Techniques on Iron Ratio Determinations, R. B. Spencer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2399-2405.

Evolution of the French Policy Related to the Studies on Long-Lived Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p49-51. First-Order Model for Durability of Hanford Waste Glasses as a Function of Composition, Pavel R. Hrma, Gregory F. Piepel, Michael J. Schweiger and Donald E. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1236-1243.

Committee, 1992), p1236-1243.

Commutee, 1992, p1236-1243.
Hanford Defense Waste Separation Options, B. A. Wolfe,
W. B. Barton and D. G. Sutherland, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p1701-1710.

The High Level Radioactive Waste Management Program in Japan, Aiji Yamato, Sumio Masuda and Hideki Sakuma, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p41-48.

HLW Immobilization in Glass: Industrial Operation and Product Quality, P. Leroy, N. Jacquet-Francillon and S. Runge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p566-573.

Committee, 1992), p300-513.

Hydrogen Generation During Treatment of Simulated High-Level Radioactive Waste with Formic Acid, J. A. Ritter, J. R. Zamecnik and C. W. Hsu, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p549-556.

p349-536.
Initial Comparison of Leach Behavior Between Fully Radioactive and Simulated Nuclear Waste Glasses Through Long-Term Testing. Part I. Solution Analysis, Xiangdong Feng and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), app. 203-203. p925-933.

p923-933.

An Overview of Partitioning-Transmutation, Allen G. Croff and Gordon E. Michaels, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1359-1367.

Partitioning and Transmutation of Long-Lived Fission Products, J. A. Rawlins, D. W. Wootan, R. A. Karnesky, F. M. Mann and W. W. Schulz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1211-171. p1711-1717.

Phase Stability of Simulated Nuclear Waste Glasses, I. Joseph, T. V. Palmiter and L. D. Pye, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Waste Management Program Committee, 1972, p911-916.

A Pilot Scale Demonstration of the DWPF Process Control and Product Verification Strategy, Nick D. Hutson, Carol M. Jantzen and D. Chris Beam, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1256-23. p525-532.

Projected Compositions and Radiogenic Properties of DWPF Glasses, J. R. Fowler and M. J. Plodinec, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

1992), p904-910.

Quality Assurance at a High Level Waste Plant—The Successful Approval of WVP, Sellafield to BSS882/ ISO9002, Tim Houghton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p562-565. Return to Italy of Vitrified High Level Wastes from U.K.: Operational and Regulatory Aspects, G. F. Eletti, F. P. Michetti and M. Tocci, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p256-262. Technological Parameters of Underground Facilities for Long-Term Storage of High-Temperature Sources, O. L. Kedrovsky, I. Y. Shishchits and V. N. Vorobjev, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2410-2414.

Thermal History and Crystallization Characteristics of

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, S. L. Marra, R. E. Ed-wards and C. M. Jantzen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924.

Transportation, Interim Storage, and Disposal Alterna-tive for Vitrified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

Program Committee, 1992, pol 3-019. Waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing Plant, Krishna Vinjamuri, Swami V. Raman, Dieter A. Knecht and James D. Herzog, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1261-1271.

Alternate Conceptual Model of Ground Water Flow at Yucca Mountain, Linda L. Lehman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p310-320.

Application of Decision Support Systems (DSS) to the Management of Radioactive Wastes, René F. Reitsma and Jacquelyn F. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p469-474.

Management r rogram Committee, 1992), p469-414.
An Assessment of the Transportation Costs of Shipping Non-Fuel Assembly Hardware to FWMS Facilities, L. B. Shappert, P. E. Johnson, D. S. Joy, R. E. Best and F. L. Danese, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p190-195.

Grant Committee, 1992, p.190-193.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1026-1039.

Conceptual Design of a Monitored Retrievable Storage
Cask Employing Yucca Mountain Containers, C. S.
Erwin, D. R. Jackson, J. R. Oliver, M. S. Aljohani and
D. B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2235-2240.

pain Committee, 1992), p.2235-2240.

A Context for Understanding the Significance of Radiation Exposures from the MRS, Dan Kane, Ricardo Palabrica and Christine Van Lenten, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1938-1945.

p1938-1945

p1936-1943.

A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, K. Branch, N. Coburn, G. Curtis, J. Holm and S. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p156-160.

1992, p130-100.
Criticality Safety and Shielding Design Issues in the Development of a High-Capacity Cask for Truck Transport, Jack K. Boshoven, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2156-2160.

Criticality Safety of TRU Storage Arrays at the Waste Isolation Pilot Plant, William A. Boyd and Mark W. Fecteau, (High Level Radioactive Waste Management Program Committee, 1992), p2069-2077.

Data Needs for Locating Emergency Response Units, George F. List, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p437-441.

Dynamic Compaction of Nuclear Waste, Cliff Schex-nayder and Robert G. Lukas, CE Mar. 92, p64-65.

Economic Analysis of Including an MRS Facility in the Waste Management System: A Revisit, J. W. Williams, C. Conner, A. J. Leiter and E. Ching, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1903-1908. p1903-1908.

Education: Gateway to the Solution, Ginger P. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10.

Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, M. Pechs and K. Einfeld, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1181-1187.

The Flow to Licensing: Technical Data Tracking and the Licensing Support System (LSS), Jan Statler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2088-2092.

1992), p.2088-2092.
High Level Radioactive Waste Management, 2 vols., High Level Radioactive Waste Management Program Committee, (James S. Tulenko, chmn.), 1992, 0-87262-891-4, 2492p.
The Human Side of Systems, Harold E. (Smoke) Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1534-1541.
Impacts of Transportation Resulptions on Spent England

Impacts of Transportation Regulations on Spent Fuel and High Level Waste Cask Design, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p201-203.

Information Convservation and Retrieval—A Nordic Nuclear Safety Research Project, Mikael Jensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2202-2206.

dioactive Waste Management, runn Level Radioactive Waste Management Forgram Committee, 1992), p2202-2206.

Information Management for the Department of Energy Office of Civilian Radioactive Waste Management, Barbara A. Cerny, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2078-2082.

In-House Training, Formal Education and Public Outreach, Yolanda A. Willis, (High Level Radioactive Waste Management Program Committee, 1992), p2190-2201.

An Inside Look at the 40 CFR 191 Containment Requirements, Floyd L. Galpin, Raymond L. Clark and Caroline Petti, (High Level Radioactive Waste Management Program Committee, 1992), p1047-1054.

Intermediate Level Waste Transport Shielding Study, M. H. Dean, L. S. Grindrod, S. M. Jones and R. W. T. Sievwright, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2062-2068.

Materials Testing Aspects of the Problem of the Chernobyl NPP 4th Unit's High-Level Radioactive Products Burial, E. B. Anderson, B. E. Burakov and E. M. Pasukhin, (High Level Radioactive Waste Management Program Committee, 1992), p2052-2398.

A Method for Relating Impacts with Yielding and Unyielding Targets, D. J. Ammerman, (High Level Radioactive Waste Management Program Committee, 1992), p2255-2259.

MRS Project Management, J. W. Doman and J. Vlahakis, (High Level Radioactive Waste Management, High Kevel Radioactive Waste Management, High Level Radioactive Waste Managem

p. 2253-2259.

MRS Project Management, J. W. Doman and J. Vlahakis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p. 1896-1902.

A New Methodology for Repository Site Suitability Evaluation, Ian Miller, Richard Kossik and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 1945-191.

An ORIGENZ Update for PCs and Mainframes, Scott B. Ludwig, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 193-98.

Overview of the Radioactive Waste Management Program Committee, 1992, p. 193-98.

Overview of the Radioactive Waste Management Programme of the OECD/NEA, Jean-Pierre Olivier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p52-56.

Preliminary Assessment of the Benfits of Derating a Cask for Increasing Age/Burmup Capability, B. L. Broadhead, C. V. Parks, D. S. Joy and J. S. Tang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2182-2189.

p216-2103.

Public Attitudes About Radioactive Waste, Ann S. Bisconti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1-3.

Radiation Measurements for Verifying the Loading of Burnup Credit Casks, Ronald I. Ewing, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2161-2164.

Realizing Opportunity Horizons: DOE's Records Information Systems Design Efforts, Daniel J. Graser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2098-2105.

dioactive Waste Management Program Committee, 1992), p2098-2105.

Risk Assessment of Shipping Radioactive Waste Using the Standard Waste Box, O. S. Wang, R. F. Carlstrom, G. A. Coles and M. V. Shultz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p416-420.

Routine Methods for Post-Transportation Accident Recovery of Spent Fuel Casks, L. B. Shappert, R. B. Pope, R. E. Best and R. H. Jones, (High Level Radioactive Waste Management Program Committee, 1992), p1855-1859.

Safety Analysis for Waste Transports to the Planned Final Waste Repository KONRAD, F. Lange, D. Gründler and G. Schwarz, (High Level Radioactive Waste Management Program Committee, 1992), p421-426.

Sharing Waste Management Data Over a Wide Area Computer Network, William Menke and Paul Friberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p827-832.

Shielding Design of the Ventilated Storage Cask, John H.

mittee, 1992), p827-832.

Shielding Design of the Ventilated Storage Cask, John H.

Kessler, John V. Massey and Henry H. Tran, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p2047-2055.

Structural Credit for Depleted Uranium Used in
Trasnport Casks, R. Salzbreaner, G. W. Wellman, K.

B. Sorenson and P. McConnell, (High Level Radioactive
Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p2241-2248. p2241-2248.

p2241-2248.

Supervision and Automatic Control of Robotic Systems in Nuclear Environments, J. Benner and K. Leinemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p966-973.

The Thermal Analysis of BR-100: A Barge/Rail Nuclear Spent Fuel Transportation Container, A. B. Copsey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1848-1854.

Towards Confidence in Transport Safety: Demonstrating an Extraordinary Safety Program, R. W. Robison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1921-1926.

Level Kadioactive Waste Management Program Committee, 1992b, p1921-1926.
Transport of Multiassembly Sealed Canisters, R. D. Quinn, R. A. Lehnert and J. M. Rosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2219-2226.

Waste Management Program Committee, 1992), p2219-2226.

Transportation, Interim Storage, and Disposal Alternative for Vitrified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

Understanding Nuclear Waste Management Within a Global Framework, R. R. Powell, M. Robinson and W. Pankratius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1465-1469.

Utilization of Waste Sulfur in Construction Materials and as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, William C. McBee, Frank E. Ward, William T. Dohner and Harold Webe, Frank E. Ward, William T. Dohner and Harold Webe, Frank E. Ward, William T. Dohner and Harold Webe, Frank E. Ward, William T. Dohner and Harold Webe, Frank E. Ward, William T. Dohner and Harold Webe, Frank E. Ward, William T. Dohner and Harold Webe. Prank E. Ward, William T. Dohner and Harold Webe. Prank E. Ward, William T. Dohner and Harold Webe. Prank E. Ward, William T. Dohner and Harold Webe. Prank E. Ward, William T. Gaster Maragement, ed., 1992, p16-127.

Water-Rock Interaction in New Zealand Hydrothermal Systems: Comparison of Some Simulated and Observed Geochemical Processes, William E. Glassley Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p352-356.

Radioactivity
Decision Management for the Hanford Environmental
Dose Reconstruction Project, William J. Roberds, H.
A. (Walt) Haerer and Dettof von Winterfeldt, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p1743-1750.

An Evaluation of the Proposed Tests with Radioactive Waste at WIPP, Lokesh Chaturvedi and Matthew Silva, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p600-609.

An Overview of Partitioning-Transmutation, Allen G. Croff and Gordon E. Michaels, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1359-1367.

Partitioning and Transmutation of Long-Lived Fission Products, J. A. Rawlins, D. W. Wootan, R. A. Karnesky, F. M. Mann and W. W. Schulz, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1711-1717.

Understanding the Medical Applications of Radionu-clides, Darrell W. McIndoe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 478-1484.

Transport of Low-Level Radioactive Soil at Deep-Ocean Disposal Site, James S. Bonner, Carlton D. Hunt, John F. Paul and Victor J. Bierman, Jr., EE Jan./Feb. 92,

Brackish Groundwater Desalting in Southern California:
A Summary of Case Studies, Lee A. Jacobi, Julius Y.
Ma and William R. Everest, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p587-592.

Integrated Assessment of Environmental Risk and Human Response, Mitchell J. Small, (Risk-Based Deci-sion Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p78-91.

Multi-Stage Diffused Bubble Aeration System for the Removal of Volatile Organics and Radon, a Case History, A. David Marino and Jerry Lowry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p581-586.

Detential Increases in Natural Radon Emissions Due to Heating of the Yucca Mountain Rock Mass, C. Pescatore and T. M. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1599-1606.

session Summary—Risk Communication and Perception, Robert O'Connor, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p348-349.

## Raft foundations

Design and Performance of Two Port Silos on Improved Ground, M. U. Ergun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p842-854.

### Rail transportation

Fixed Rail Service to Airports: Bibliography, Fixed Rail Service to Airports Subcommittee of the ASCE Land-side Committee, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p232-234.

Future Impact of Trucking Reform on Railway Revenue, Ahmed M. Gadi and Afifi H. Soliman, TE Sept./Oct. 92, p729-743.

Learning Rules for Driving Scenarios for an Urban Rail Corridor with Closely Spaced Stations, S. Khasnabis, T. Arciszewski and S. Khurshidul Hoda, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p983-990.

On-Off Terminal Ship-to-Rail Transfer, Asaf (Ports '92, David Torseth, ed., 1992), p108-120.

Opportunities for Fixed Rail Service to Airports, William J. Sproule and Srinivasa Mandalapu, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p223-231.

Preliminary Assessment of the Benfits of Derating a Cask for Increasing Age/Burnup Capability, B. L. Broad-head, C. V. Parks, D. S. Joy and J. S. Tang, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

Rail Industry Trends Related to Waste Transportation, Ruth Maddigan, Marlene Owens and Paul Shelton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1330-1335.

Rail Revival, Paul Tarricone, CE Jan. 92, p36-39. Standing Room Only at Portland Bid Meeting, CE Dec. 92, p14.

The Thermal Analysis of BR-100: A Barge/Rail Nuclear Spent Fuel Transportation Container, A. B. Copsey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1848-1854.

Railroad engineering Rehabbing the Rails, Stewart D. Winn, Jr., CE Sept. 92, p54-57.

Railroad grade crossings Safety is in the Eye of the Beholder, CE Nov. 92, p10.

Railroad stations
Commercial Uses of Land Around Urban Railway Stations in Greece, J. Tzouvadakis, UP Dec. 92, p1 19-127.

Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Railroad tracks

Geotextile Helps Tailor Old Rail Bed for New Use, CE Jan. 92, p83.

Rail Revival, Paul Tarricone, CE Jan. 92, p36-39.

Rehabbing the Rails, Stewart D. Winn, Jr., CE Sept. 92, p54-57.

Railroads

Artificial Gravity Augmentation on the Moon and Mars, Lex Schultheis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 738-1747.

Design of Flood Protection for Transportation Alignments on Alluvial Fance, Richard H. French, IR Mar./ Apr. 92, p320-330.

Design of Oak Point Link Railroad Trestle, Eugene Poliner and Kim Plumacher, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809.

A Multi-objective Criteria Analysis for Alternative Route Planning, Amy Zlotsky, Michael P. Gutzmer and Guy M. Evasco, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p474-479.

Rail Revival, Paul Tarricone, CE Jan. 92, p36-39. Soilcrete Cut-Off Wall for Undercrossing a Busy Rail Line, Walter Steiner, Ernst Schneider and Manfred Cartus, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p384-397.

Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chicote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), pl-14.

Transportation for Hong Kong Requires Solutions to Issues and Problems, C. K. Chow, El July 92, p294-306.

Urban Transit Guides Application of Advanced Train Control, Sesto Vespa and Tom Parkinson, TE Jan./Feb. 92, p146-159.

Rail Revival, Paul Tarricone, CE Jan. 92, p36-39.

Reinforced Sand Behavior Overlying Compressible Subgrades, Gerald P. Raymond, GT Nov. 92, p1663-1680.

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), n238, 231 p328-331.

Rain gages
Rainfall Area Identification Using GOES Satellite Data,
Ke S. Cheng and Sun F. Shih, IR Jan/Feb. 92, p179-

Short-Duration Rainfalls in Sicily, Giovanni B. Ferreri and Vito Ferro, HY Mar. 90, p430-435.

Rainfall

Adaptation of Horton and SCS Infiltration Equations to Complex Storms, Gert Aron, IR Mar./Apr. 92, p275-284.

284. Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.
Assessing Uncertainty of Unit Hydrograph, Yeou-Koung Tung and Bing Zhao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p543-548.

Calculation of Runoff from Rainfall Using "NURP" Data, Albert H. Halff, Henry M. Halff and Juan S. Ro-driguez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), 9437-492.

Calibrating SHE Soil-Erosion Model for Different Land Covers, J. M. Wicks, J. C. Bathurst and C. W. Johnson, IR Sept./Oct. 92, p708-723.

Design and Proposed Construction Techniques for Pangue Dam, Brian A. Forbes, Dario Croquevielle B. and Hernan Zabaieta G., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p47-62.

ed., 1992), p47-62.
Design of Miel II—A High RCC Dam, Alberto Marulanda, Fabio Amaya and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p83-98.

The Drought Occurrence and Response Measures in Taiwan Area, 1991, Hong-Hsi Hsu and Jinn-Chuang Yang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p977-987.

Farthfour Evaluation, and Control: A Case History, Mi-Farthfour Evaluation, and Control: A Case History, Mi-

and Nani G. Bhowmik, ed., 1992), p977-987.

Earthflow Evaluation and Control: A Case History, Michael R. Thomas and Alan L. Kropp, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864.

Hydrologic Investigation of the April, 1983 Flooding in New Orleans, Louisiana, Michael A. Ports, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p260-267.

Importance of the Tropical Rainfall Measuring Mission (TRMM) Satellite to Hydrological Investigations, Joanne Simpson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p523-528.

Modeling Irrigation Schedules for Lowland Rice with Sto-Modeling Irrigation Schedules for Lowland Rice with Sto-

man, ed., 1992), p523-528.

Modeling Irrigation Schedules for Lowland Rice with Stochastic Rainfall, Aflab H. Azhar, V. V. N. Murty and H. N. Phien, IR Jan. Feb. 92, p36-55.

Modeling Monsoon-Affected Rainfall of Pakistan by Point Processes, Thian Yew Gan and Zahoor Ahmad, WR Nov. Dec. 92, p671-688.

wrk Nov./Dec. 92, p671-688.

Prediction and Sensitivity of Recharges Due to Rainfall, Sampath K. R. Danda and Lakshmi N. Reddi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402.

Probabilistic Analysis of Groundwater Levels in Hillside Slopes, Lakshmi N. Reddi and Tien H. Wu, GT June 91, p872-890.

Rainfall Area Identification Using GOES Satellite Data, Ke S. Cheng and Sun F. Shih, IR Jan./Feb. 92, p179-

Rainfall Intensity-Duration-Frequency Formula for India, Umesh C. Kothyari and Ramchandra J. Garde, HY Feb. 92, p323-336.

Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p19-24.

Streamflow Forecasting Using Trainable Neural Net-works, Jason Smith and Robert N. Eli, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p56-61.

Rainfall duration

A Frequency Surface for Rainfall Intensity and Duration, G. V. Loganathan and M. A. Parkin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p386-390.

Rainfall Intensity-Duration-Frequency Formula for India, Umesh C. Kothyari and Ramchandra J. Garde, HY Feb. 92, p323-336. Soirt-Duration Rainfalls in Sicily, Giovanni B. Ferreri and Vito Ferro, HY Mar. 90, p430-435.

Rainfall frequ

Rainfall frequency
A Frequency Surface for Rainfall Intensity and Duration,
G. V. Loganathan and M. A. Parkin, (Water Resource:
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p386-390.
Jury Verdict: Frequency versus Risk-Based Culvert Design, Gary L. Lewis, WR Mar/Apr. 92, p166-184.

Rainfall Intensity-Duration-Frequency Formula for India, Umesh C. Kothyari and Ramchandra J. Garde, HY Feb. 92, p323-336.

HY Feb. 92, p323-336.

Rainfall intensity

Design Discharge for Urban Stormwater Drainage, A.
Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p713-718.
A Frequency Surface for Rainfall Intensity and Duration,
G. V. Loganathan and M. A. Parkin, (Water Resources
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p386-390.

Horton Infiltration Equation Revisited, A. Osman Akan,
IR Sept./Oct. 92, p828-830.

Rainfall Intensity-Duration-Frequency Formula for
India, Urnesh C. Kothyari and Ramchandra J. Garde,
HY Feb. 92, p323-336.

HY Feb. 92, p323-336.

Rainfall-month relationships

Assessment of Derived Flood Frequency Distributions,
Timothy H. Raines and Juan B. Valdes, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p268-273.

Definition of a Weighting Function for Rainfall in Aggregated Rainfall-Runoff Models, Paolo Bartolini and
Juan B. Valdes, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p537542.

542.
Experiments with Wind Effects on Pavement Runoff, Joseph R. Reed, David F. Kibler and George Krallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.
Investigation of Curve Number Procedure, Allen T. Hjelmfelt, Jr., HY June 91, p725-737.
The MIDUSS Touch, Ed Chamberland, CC June 92, p1.10-14.

p1,10-14. p1, 10-14.
Rainfall-Runoff Relations for the Puget Sound Area, R. S. Dinicola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p890-894.

Ramps
Hydrologic Investigation of the April, 1983 Flooding in
New Orleans, Louisiana, Michael A. Ports, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p260-267.

Random processes

Application of the Sampling Theorem to the Representation of Random Fields, Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p33-36.

Critical Bucking Load Statistics of an Uncertain Column, Garrett D. Jeong, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p563-566.

Fatigue Strength of Welded Joints Under Broadband Loadings, David P. Kihl, Shahram Sarkani and James A. Kuny, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p428-431.

Nonlinear Diffraction of Random Waves by a Vertical Cylinder, Ahsan Kareem, C. C. Hsieh and A. N. Williams, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p459-

Pre-Envelope Covariance Differential Equations, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p180-

Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp. Probabilistic Order of Chaotic Dynamics, A. H.-D. Cheng, C. Y. Yang and K. Hackl, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p420-423. Recursive Parameter Estimation for ARMA Simulations, Bingqi Miao, EM Dec. 92, p2484-2490. Reliability. Based Specification of Design Load-Effect for

Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, R. H. Sues and L. A. Twisdale, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992). p511-514.

Response Variability of Structures Subjected to Bifurca-tion Buckling, G. V. Palassopoulos, EM June 92, p1164-1183.

p1164-1183.

Risk Consistent Estimate of Heat-Straightening Applications. I: Plates, Luis A. de Béjar, Paul F. Robinson and
R. Richard Avent, ST Dec. 92, p3394-3409.

Risk Consistent Estimate of Heat-Straightening Applications. II: Beams, Luis A. de Béjar, Paul F. Robinson
and R. Richard Avent, ST Dec. 92, p3410-3426.

Seismic Response Variability of Soil Sites, C. H. Yeh and
M. S. Rahman, (Probabilistic Mechanics and Structural
and Geotechnical Reliability, Y. K. Lin, ed., 1992),
n392-394. p392-395.

and Geotechnical Reliability, Y. K. Lin, ed., 1992), p392-395. Simulation-Based Excursion Statistics, Gordon A. Fenton and Erik H. Vanmarcke, EM June 92, p1129-1145. Some Modeling and Analysis Techniques for Wave Propagation in Random Media, Georges A. Bécus, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p377-380.

A Stochastic Approach to the Fatigue Reliability, Yuan Jie Lua, Wing Kam Liu and Ted Belytschko, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p324-327.
Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H.-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

Wave Propagation in a Randomly Layered Medium, Werner Kohler, George Papanicolaou and Benjamin White, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p384-387.

Wavefront Propagation in Random Granular Media, Martin Ostoja-Starzewski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p384-387.

Application of the Sampling Theorem to the Representa-tion of Random Fields, Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p33-36.

Asymptotic Importance Sampling, Marc A. Maes, Karl Breitung and Philippe Geyskens, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p96-99.

K. Lin, ed., 1992), p96-99.

Comparison of Some Importance Sampling Techniques in Structural Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p108-111.

Controlled Braking on Uneven Roads, Dieter Ammon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p65-68.

An Exact Expression for the Distribution of Linear Combinations of Uniform Random Variables, Chung-Chih Lin and Marc P. Mignolet, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p555-538.

Experimental Study of the Transient Temperature Distributions.

ed., 1974), p333-3-38. Experimental Study of the Transient Temperature Distributions in Concrete, Paul C. Hoffman and Stanley K. Ciesielski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p200-203.

203.
Finite Element Dynamic Reliability Analysis with Condensation, Sankaran Mahadevan and Sandeep Mehta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p332-335.
Jone Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Mechanics and Structural and V. K. Lin, ed., 1992), p292-295.

Optimal Discretization of Random Fields for SFEM, Chun-Ching Li and A. Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p29-32.

Point-Estimate Method for Calculating Statistical Moments, K. S. Li, EM July 92, p1506-1511.

Pseudo-Simulation Method for Stochastic Problems, B. A. Zeldin and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p37-40.

Random Aspect of the Stress Inside Granules Media

ed., 1992), p37-40.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166.

Reiiability Analysis of Uncertain Systems Under Random Loadings, Rwey-Hua Cherng and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p49-52.

Reliability of Nonlinear Frame Structures by SFEM, Achintya Haldar and Yiguang Zhou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p336-339.

Sampling Techniques for Time-Variant Reliability Prolems, R. E. Melchers, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p300-103.

A Selective MC. Simulation Technique for Nonlinear

1992), p100-103.
A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p69-72.
Stochastic FEM Based on Local Averages of Random Vector Fields, W. Q. Zhu, Y. J. Ren and W. Q. Wu, EM Mar. 92, p496-511.
Stochastic Finite & Boundary Element Simulations, Gautam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123

p120-123

Stochastic Mixed Finite Difference Method, P. D. Spanos and B. A. Zeldin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p804-

801.
Stress Transfer Within Granular Geomaterials, Gabriel Auvinet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p. 159-162.
Structural Reliability of Seismic Isolation System, Kazuta Hirata, Kenji Shirahama and Takahiro Somaki, (Probabilistic Mechanics and Structural and Geotechnical Reliability Mechanics and Structural and Geotechnical Reliability. bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p57-60.

TMDS for Vibration Control of Systems with Uncertain Properties, Hector Jensen, Mehdi Setareh and Ralf Peek, ST Dec. 92, p3285-3296.

Analog Electronic Simulations of a Nonlinear System, R. Valery Roy and Eric Nauman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p668-671.

Control of Along-Wind Response of Structures by Mass and Liquid Dampers, Y. L. Xu, B. Samali and K. C. S. Kwok, EM Jan. 92, p20-39.

Equivalent Linearization for Seismic Responses. I: Formulation and Error Analysis, Young J. Park, EM Nov. 92, p2207-2226.

92, p.2201-2226.
 Forced Vibration Testing of an Expanded Base Concrete Pile, Alex Sy and David Siu, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p.170-186.
 In-Plane Non-Linear Random Vibration of Composite Plates, Ronald S. Harichandran and Ahmad Hawwari, (Probabilistic Mechanics and Structural and Geotechni-

(robushishi prechains and stretch and development cal Reliability, Y. K. Lin, ed., 1992), p188-191. Linear System Spectral Moments Determination, Pol D. Spanos and Scott M. Miller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p192-195.

Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p292-295.

Nonlinear System under Non-Gaussian Impulsive Noise Excitation, G. Q. Cai and Y. K. Lin, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p148-151.

Nonstationary Response Characteristics of Linear MDOF Systems, K. Papadimitriou and J. L. Beck, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p572-575.

Nonstationary Response of Structures with Closely Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.

On the Approximated Solution of Non-Linear Systems Under Non Gaussian Excitations, G. Falsone and M. Vasta, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), pl 40-143.

Polynomial Chaos for Nonlinear Random Vibration, R. Ghanem and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p404-407.

ed., 1992), p404-407.

Power Flow and Energy in Primary-Secondary Systems, G. Chen and T. T. Soong, EM May 92, p1046-1051.

Random Vibration of the Viscoelastic Structure under Series of Stochastic Excitations, Pawel Sniady and Stanislaw Zukowski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), 152,162 p152-155.

Random Vibration under Propagating Excitation: Closed-Form Solutions, Ronald S. Harichandran, EM Mar. 92, p575-586.

Reliability of Degrading Dynamic Systems with Applica-tions, Mircea Grigoriu and Igor Rychlik, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p300-303.

Response of Mono-Coupled Distributed Parameter Systems to Random Excitation, D. M. McFarland, L. A. Bergman and G. G. G. Lueschen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p576-579.

Response of Systems with Uncertain Parameters to Sto-chastic Excitation, H. Jensen and W. D. Iwan, EM May

92, p1012-1025.

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p328-331.

Truncation of Infinite Hierarchy for Hysteretic Systems, George Tsiatas and Sau-Lon James Hu, (Probabilistic Mechanics and Structural and Geotechnical Reliability,

Y. K. Lin, ed., 1992), p416-419.

Vibration of a Bridge Under a Random Train of Moving Loads, M. Di Paola and G. Ricciardi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p136-139.

Wind Effects on Base-Isolated Structures, Yu Chen and Goodarz Ahmadi, EM Aug. 92, p1708-1727.

Wind-Induced Response of Structurally Asymmetric High-Rise Buildings, M. Saiful Islam, Bruce Elling-wood and Ross B. Corotis, ST Jan. 92, p207-222.

The Effect of Wave Grouping on the Characteristic Wave Height, Chia Chuen Kao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p83-86.

Intermittent Kinematics for Nonlinear Random Waves Near Ocean Surface, Sau-Lon James Hu and Dongsheng Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p91-

Irregular Wave Setup and Run-up on Beaches, Nobuhisa Kobayashi and Andojo Wurjanto, WW July/Aug. 92, p368-386.

Kinematics of Nonlinear Random Waves near Free Surface, Sau-Lon James Hu and Dongsheng Zhao, EM Oct. 92, p2072-2086.

Laboratory Simulations of Directionally Spread Shoaling Waves, Steve Elgar, R. T. Guza, M. H. Freilich and M. J. Briggs, WW Jan./Feb. 92, p87-103.

Modal and Wave Load Identification by ARMA Calibra-tion, Jakob Laigaard Jensen, Poul Henning Kirkegaard and Rune Brincker, EM June 92, p1268-1273.

A Non-Gaussian Fatigue Model for Offshore Structures, Jin Wang and Loren D. Lutes, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p463-466.

Nonlinear Diffraction of Random Waves by a Vertical Cylinder, Ahsan Kareem, C. C. Hsieh and A. N. Williams, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p459-462.

Shoaling and Breaking of Random Wave Trains: Spectral Approaches, James T. Kirby, James M. Kaihatu and Hajime Mase, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p71-74.

Wave Runup and Forces on Cylinders in Regular and Random Waves, John M. Niedzwecki and Arun S. Duggal, WW Nov./Dec. 92, p615-634.

Range management

A Description of LANDSIM and its Uses, Thomas S.
Russell, Jr., Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitier and Michael E.
Zientek, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941.

Rangeland
Hydraulic Roughness Coefficients for Native Rangelands,
Mark A. Weltz, Awadis B. Arslan and Leonard J. Lane,
IR Sept./Oct. 92, p776-790.

Rapid transit railways
Dallas Light Rail Tunnel Breaks New Ground, CE July
92, p16,19.

92, p16,19.

Economy Puts Brakes on High-Speed Rail Projects, CE Dec. 92, p16.

Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Performance of Viaduct Girders under Static and Dynamic Loads, Tso-Chien Pan and Hee Kiat Cheong, CF May 92, p96-106.

Texas High-Speed Rail Inches Alone CE May 92, 220.

Texas High-Speed Rail Inches Along, CE May 92, p20. TRB Reports Weigh New Transport Technologies, CE Feb. 92, p20.

Rapid transit systems
Bored Tunneling for Singapore Metro, T. W. Hulme and
A. J. Burchell, CO June 92, p363-384.

Prevailing Wage Can't Be Required, CE June 92, p32.

Ratings
Residual Deformation Analysis for Inelastic Bridge Rating, Burl E. Dishongh and Theodore V. Galambos, ST
June 92, p494-1508.

June 92, p494-1508.

Sediment Rating Curves Based on Ranked Values, Wolfgang Summer and Jean-Pierre Villeneuve, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p683-688.

Rayleigh waves

Effects of Multiple Modes on Rayleigh Wave Dispersion
Characteristics, Kohiji Tokimatsu, Shuji Tamura and
Hisaya Kojima, GT Oct. 92, p1529-1543.

Non-Intrusive Rayleigh Wave Measurement System for
Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodriguez, Maria C. Arbelaez, Takenori Satoh and Edward
Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992),
p390-402.

Use of Short-Period Microtremors for V<sub>5</sub> Profiling, Kohji Tokimatsu, Kenichiro Shinzawa and Shinichi Kuwaya-ma, GT Oct. 92, p1544-1558.

Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

Gas-Transfer Measurements Using Headspace Analysis of Propane, John R. Thene and John S. Gulliver, EE Nov/Dec. 90, p1107-1124.

Real-time programming
Traffic Signal Using Mixed Controller Operations, S.
Manzur Elahi, A. Essam Radwan and K. Michael Goul,
TE Nov./Dec. 92, p866-880.

Optimization Model for Operation of Recharge Basins, Hasan Mushtaq, Larry W. Mays and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p305-309.

Reclaimed water

Computer Support for Water Quality Management in San Diego Bay, A. E. Bale and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p176-181.

Groundwater Recharge as a Reclaimed Water Transport Mechanism, Thomas G. Richardson and Nereus L. Richardson, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p61-66.
Nutrient Removal for Two Industrial Recycling Projects, Richard Sykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p382-387.
Reclaimed Water, Irrigation, and Conservation Pricing, Ronald E. Young, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p161-162.

Reclamation
The Design of a Reclamation Scheme by Preloading, S. Ossama Mazen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1019-1030.
Hydrologic Considerations in Mined Land Reclamation, Patrick T. Tyrrell and Martin W. Stearns, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p383-388.

CEs Help Rebuild Los Angeles, CE Aug. 92, p8.
Cofferdam Construction Speeds Powerplant Rehab, CE

conterdam Construction Speeds Powerplant Rehab, CE Mar. 92, p14. Container Terminal Planning: 2001, James E. Davis, (Potts '92, David Torseth, ed., 1992), p15-28. Crane Raise with Zero Downtime, William L. Casper and Alex Surko, (Ports '92, David Torseth, ed., 1992), p749-756.

p749-736.
Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Ports '92, David Torseth, ed., 1992), p737-748.
Decision Management for the Hanford Environmental Dose Reconstruction Project, William J. Roberds, H. A. (Walt) Haerer and Detlof von Winterfeldt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1721-1750. 1992), p1743-1750.

Managing Large Complex Projects, William B. Derrick-son, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1751-1757.

mittee, 1992, pt 751-1757.
The Reconstruction of the Morton Street Evacuation and Ventilation Shaft, Daniel M. Hahn, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p91-106.
Rehab Helps Columbus Celebrate Anniversary, CE May 92, p10

92, p10.

92, p.10. A Removable Submarine Cover for Drydock No. 2 Modernization, Ted Bobroski and Joseph J. Bonasia, (Ports '92, David Torseth, ed., 1992), p506-519. The Total System Solution, David J. Daley and James B. Hinte, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647. Trouble on the Waterways? Paul Tarricone, CE Feb. 91, a52-54.

Upgrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alex-ander Surko, Jr., (*Ports '92*, David Torseth, ed., 1992),

Records management
Anatomy of the Loma Prieta Earthquake Records of Two
Steel Buildings Using MIMO System Identification, Y.
Li and S. T. Mau, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p689-

A Preliminary Report on OCR Problems in LSS Docu-ment Conversion, T. A. Nartker, J. Kanal and S. V. Rice, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2106-2108.

Realizing Opportunity Horizons: DOE's Records Information Systems Design Efforts, Daniel J. Graser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2098-2105. Records Management in Engineering Firms, Dennis O. Hamilton, ME Oct. 91, p346-356. Records Management in Support of the Licensing Process for the High Level Radioactive Waste Facility, Dennis G. Sheats, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2083-2087.

Recreation

Drownproofing of Low Overflow Structures, Hans J. Leu-theusser and Warren M. Birk, HY Feb. 91, p205-213. New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p38-71.

Recreational facilities

Recreational Scilines
Design Considerations for Small Artificial Islands in
Franks Tract, California, Craig H. Everts, Vedat
Demirel, Russell H. Boudreau, Emy T. Carpenter and
Richard Dornhelm, (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), p779-793.
The Greening of Greens, R. Todd Borden, CE Oct. 92,

Interfacing with the Public on Water-Related Issues— What TVA is Doing, Janet C. Herrin and Arland W. Whitlock, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p293-298.

Recruiting

Engineering Women Into the Workplace, Patti Hinckley, CE Nov. 91, p66-67.

Future Resources for Engineering, Peggy A. Johnson, Jill D. Leasure and Estela S. Llinas, El Jan. 92, p30-37. New ASCE Standards Activities Under Way, CE Sept. 92,

p78,80.

p78,80.

Professionalism and Marketing of Civil Engineering Profession, John A. Alexander, El Jan. 91, p10-20.

Providing Lead Role in Work-Force Diversity, Robert E. Wolfe and Marie E. Anspach, El Jan. 92, p38-48.

Strategies to Stem Declining Engineering Enrollments, Jack D. Bakos, Jr., El July 92, p250-257.

Technical Personnel Shortages in Construction Industry, Russel C. Jones, El Jan. 90, p16-26.

Women in Civil Engineering—Graduate's Perspective.

Women in Civil Engineering—Graduate's Perspective, Jack D. Bakos, Jr., El Jan. 92, p16-29.

Rectangular cross section
Bending of Rectangular Cross-Section Cantilever with
Cylindrical Cutouts, A. K. Naghdi, EM Apr. 92, p831842.

Rectangular hollow sections
Weldment Design for RHS Truss Connections. I: Applications, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2784-2803.
Weldment Design for RHS Truss Connections. II: Experimentation, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2804-2820.

Recycling

Actinide Recycle and Waste Management, Marion L.

Thompson and Ira N. Taylor, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Commince, 1992), p1368-1372.

And it Tastes Great, Too, CE Aug. 92, p8.

Asbestos Melting, Reuse Could Ease Landfill Demand, CE Jan. 92, p18.

CE Jan. 92, p18.

Baltimore City Recycling Program—A Case History, George G. Balog, Kenneth J. Strong and Ellen L. Kobler, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p532-536.

Building Materials Have Nine Lives, CE July 92, p11.

California Plumbs Toilet Fixture Possibilities, CE Jan. 92, p22,24.

92, p.22,24.

Controlling the Flow of Recyclable Material, David L. Snyder, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, p.9-21.

The Environment is Good Business in France, Virginia Fairweather, CE Mar. 92, p.66-68.

In-Vessel Compost Systems: Technology Status, Philip E. Smith and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p.291-296.

Mixed Broken Glass Processing Solutions, Nathiel G. Egosi, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p.71-80.

Neutralysis: Lightweight Aggregate and Recycling, Robert

L. Bergeson, ed., 1992), p71-80.
Neutralysis: Lightweight Aggregate and Recycling, Robert S. Merdes, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p81-91.
Optimal Scheduling of Consecutive Landfill Operations with Recycling, Timothy L. Jacobs and Jess W. Everett, EE May/June 92, p420-429.

Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, Kwang W. Kim, Bong H. Lee, Je-Seon Park and Young S. Doh, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343.

Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343.

Physicochemical and Rheological Properties of Microwave Recyled Asphalt Binders, Laurand H. Lewandowski, Rogers Graham and Jim Shoenberger, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-461.

Planning Centralized Materials Recovery Facilities, Renée A. Lawer and Jay R. Lund, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p537-542.

Properties of Composites Using Recycled Plastics, Karim S. Rebeiz, David W. Fowler and Donald R. Paul, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p537-542.

Recycle, Yes, Pay for It, Maybe, CE Nov. 92, p10.

Recycled Materials for Port Construction, David S. Miller, (Ports '92), David Torseth, ed., 1992), p815-825.

Recyled Paper Controls Wisconsin Erosion, CE June 92, p95.

Salvage Law for Outer Space, Wayne N. White, Jr., (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422.

Seattle Oil Keeps Going and Going, CE Mar. 92, p8.

Technologies for Utilization of Waste Tires in Asphalt Pavement, William E. Eleazer and Morton A. Barlaz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p193-201.

Us. Lead Recycling Plant Uses Italian Technology, CE June 92, p27-28.

Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Redundancy

Redundancy
Calibration of Redundancy Factors for Highway Bridges,
Michel Ghosn and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K.
Lin, ed., 1992), p344-347.
Entropy-Based Redundancy Measures in Water-Distribution Networks, Kofi Awumah, Ian Goulter and Suresh K. Bhatt, HY May 91, p595-614.
Necessary Redundancy in Geotechnical Engineering, Jorj O. Osterberg, GT Nov. 89, p1511-1531.
Optimal Upgrading of Hydraulic-Network Reliability, Lindell Ormsbee and Avner Kessler, WR Nov./Dec. 90, p784-802.

p194-802.
Probabilistic Evaluation of Redundancy of Bridge Structures, Robert W. Kritzler and Jamshid Mohammadi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p156-159.

apeake Bay Field Modeling and Monitoring Projects, Wesley E. Coleman, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.221-233. Monitoring of the 1988 Boca Raton Beach Nourishment Project, Richard H. Spadoni, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p120-136.

Refineries Start-Ups, CE Apr. 92, p10.

Refuse derived fuel

Partitioning of Elements by Refuse Processing, Robert K. Ham, Victor A. Hammer and Gary Boley, EE Sept./ Oct. 92, p725-743.

Oct. 92, p725-743.

Refuse disposal

Baltimore City Recycling Program—A Case History,
George G. Balog, Kenneth J. Strong and Ellen L. Kobler, (Environmental Engineering: Saving a Threatened
Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p532-536.

Design of a Mechanical Refuse Barrier, Edward J.
Schmeltz, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p680-696.

Ground Improvement of Rubbish Dump Over Reclaimed
Tin Mine, Aziz Mustafa and Mohd Raihan Taha,
(Grouting, Soil Improvement and Geosymhetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p1324-1331.

Partitioning of Elements by Refuse Processing, Robert K.

Partitioning of Elements by Refuse Processing, Robert K. Ham, Victor A. Hammer and Gary Boley, EE Sept./ Oct. 92, p725-743.

Regional analysis

Regional analysis
Comprehensive Regional Socioeconomic Simulation System, Gwan Kim, Pyong Sik Pak and Yutaka Suzuki, UP Sept. 92, p81-96.
Global Change and Regional Water Resources, Nathan Buras, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p25-32.
Integrated Software for Transportation Emissions Analysis, William Loudon and Malcolm Quint, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p161-176.
A Markov Chain Approach for Analyzing Palmer

1992), p101-176.

Markov Chain Approach for Analyzing Palmer Drought Index, Marcel K. Tchaou, Saied Mostaghimi and G. V. Loganathan, (Irrigation and Drainage: Saning a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p341-346.

ainfall Intensity-Duration-Frequency Formula for India, Umesh C. Kothyari and Ramchandra J. Garde, HY Feb. 92, p323-336.

HY Feb. 92, p325-336. Regional Evaluation of Transportation Lifelines in New York State with the Aid of GIS Technology, Masanobu Shinozuka, Michael P. Gaus, Seong H. Kim and George C. Lee, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p102-109.

Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p13-24.

Regional Flow-Duration Curves for Ungauged Sites in Massachusetts, Neil Fennessey and Richard M. Vogel, WR July/Aug. 90, p530-549.

Regional Frequency Analysis Using L-Moments, J. R. M. Hosking and J. R. Wallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p13-18.

Review of Geostatistics in Geohydrology: I. Basic Concepts, ASCE Task Committee on Geostatistical Techniques in Geohydrology of the Ground Water Hydrology Committee of the ASCE Hydraulies Division, HY May 90, p612-632.

may 70, 1901.2-032.
Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p25-32.

ct., 1972, p.2-32.
Station Selection for Pooling Flood Data in a Densely Gauged Region of the UK, Duncan W. Reed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p25-30.

tegional development

Method for Preevaluation and Selection of Road Projects in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-

in Cabon, Jean-Michel Baryla, 1E Jan/reb. 92, p100178.

Regional planning
Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of 1990, Ronald J. Roggenburk, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p46-55.

Management of Agricultural Drainage Pollution Considering Regional Cooperation, T. C. Lyons and M. E. Grismer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p448-455.

Planning for Water Conservation Through Irrigation System Modernization and Rehabilitation, A. K. Dimmitt, K. I. McLaughlin, F. Z. Kamand and D. G. Welch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299.

Regional Planning for Stormwater Management, Thomas S. George and John P. Hartigan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p492-497.

Traffic Impact Study Ingredients, Peter A. Terry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p217-222.

Registration

Registration
ASCE Should Have a Construction Safety Committee, C.
E. Jackson, Jr., El Jan. 92, p56-59.

Proper Use of P.E. Seal, Robert A. Green, El July 90, p287-292.

Visioning: The Future of Civil Engineering, C. R. "Chuck" Pennoni, El July 92, p221-233.

Regression analysis
Calculation of Runoff from Rainfall Using "NURP"
Data, Albert H. Halff, Henry M. Halff and Juan S. Rodriguez, (Irrigation and Drainage: Saving a Threatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), p487-492.

Chemical Dosing of Small Water Utilities Using Regression Analysis, Glenn W. Ellis, Anthony G. Collins, Xi Ge and Catherine R. Ford, EE May/June 91, p308-319.

Conversion Between Quadratic and Power Law for Non-Darcy Flow, G. H. George and D. Hansen, HY May 92, p792-797.

Generalized Least Squares Analyses for Hydrologic Re-gionalization, Jery R. Stedinger and Gary D. Tasker, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p7-12.

Level of Significance Selection in Engineering Analysis, Kaye L. Brubaker and Richard H. McCuen, El Oct. 90, p375-387.

Optimization and Simulation of Multiple Reservoir Sys-tems, Mohammad Karamouz, Mark H. Houck and Jacque W. Delleur, WR Jan./Feb. 92, p71-81.

allout Testing of High-Strength Concrete Members, Ronald L. Dilly and Michael Abshire, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p194-205.

Simplified Building Analysis with Sequential Dead Loads—CFM, Chang-Koon Choi, Hye-Kyo Chung, Dong-Guen Lee and E. L. Wilson, ST Apr. 92, p944-

Improved Techniques in Regression-Based Streamflow Volume Forecasting, David C. Garen, WR Nov./Dec. 92, p654-670.

pos-to-fu.
 Using GIS To Locate Salinity on Irrigated Soils, Dennis
 Corwin, Mark Sorensen and James D. Rhoades, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p468-475.

Communication Creates Quality, Nips Conflict (ltr), Teck L. Chua, CE Nov. 92, p34,36. For Building Designers, Déjà Vu Can be Costly, CE Apr. 92, p19-20.

Ground Water Management in Arkansas, Jonathan Ray Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p110-115.

Implementation of the NPDES Storm Water Regulations Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area, Jill C. Bicknell and Sachiko Itagaki, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p451-456.
Regulators: Don't Overlook Public Interest (Itr), Stephen D. Hill, CE Sept. 92, p37.
The Talbert Channel Ocean Outlet Project, Craig B. Leidersdorf, Kenneth E. Smith and Ruh-Ming Li, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p745-761.

Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p605-610.

ed., 1992, po03-610.

Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G. Balog, William P. Stack, Kenneth T. Belt and Nathan J. Beil, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503.

ed., 1992), p498-503.
Baltimore Waste Water Infrastructure a Health Plan, George G. Balog, Gary A. Wyatt and Edward Serp, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p429-432.

"Compression Planning" for Continuous Improvement in Quality Programs, Yolanda A. Willis and Frank C. Hood, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1287-1297.

Committee, 1992, p1287-1297.
Contracting and Legal Issues, Robert A. Rubin and Jeannette L. Molina, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p6-25.

Developing an Industrial Toxics Management Program, Kathleen O. Gill and Tatiana Gianella, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p42-48.

O Sommon, F. Feite Linawaver, ed., 1972, ps2-46.
Development of Radioactive Waste Management Licensing Review Assistant, Wei-Whua Loa, Suan Chen, Wei-Chu Yu, Chao-Ming Pong, Ching-Lun Huang and Chen Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p243-249.

gram committee, 1992), p243-249.

Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, Hans J. Peterson and William R. Grout, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p516-522.

Earthquakes: A New Look at Cracked Masonry, Randolph Langenbach, CE Nov. 92, p56-58.
Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 191 to Other Wastes, Neil J. Numark and Suzanne R. Phelps, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1074-1081.

Excavations and Contamination, Bryan P. Sweeney and Joel S. Mooney, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p26-45.

Experience with Spent Fuel Storage Licensing, Frederick C. Sturz, Ralph H. Sievers and John R. Stokley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program 1992), p220-227.

FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarretta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

1992), p940-945.

Guidance for Decontamination of Debris, Mackenzie L. Davis, Gene P. Chou, William G. Sproat, Jr. and Peter J. Shields, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p49-54.
Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992, 0-87262-898-1, 127pp.

Impacts of Transportation Regulations on Spent Fuel and High Level Waste Cask Design, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p201-203.

Institutional Constraints to the Use of Coal Fly Ash in Civil Engineering Construction, Timothy N. Kyper, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p32-43.

Labeling of the Spent Fuel Waste Package, W. G. Cul-breth and A. K. Chagari, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p395-400.

Land Development Regulations: Roadblock to Affordable Housing, Thomas J. Olenik and S. L. Cheng, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p39-47.

Lessons Learned from Utility NRC Licensing Experience, Jay E. Silberg, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p679-684.

Licensing Code-of-Practice, Leonard T. Skoblar, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee,

1992), p1055-1061.

Licensing Issues: Clarification and Convergence, John P. Roberts, Linda J. Desell, Mary L. Birch, Lester Berkowitz and Joseph F. Bader, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236.

Needed Geologic and Seismic Rulemaking for HLW Re-positories, Jay L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p685-690.

Management Program Committee, 1992), p685-690. North Central Texas Municipalities Address the NPDES Stormwater Regulations Through Regional Coordination, George E. Oswald, Alan H. Plummer and Robert W. Brashear, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p62-63. NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, Paul Makowski and John G. Garland, Ill., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p797-802.

overview of Design and Construction in the Urban Envi-ronment, Thomas R. Kuesel, (Excavation and Support for the Urban Infinitructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p1-5.

Physical Processes and Effects of Magmatism in the Yucca Mountain Region, Greg A. Valentine, Bruce M. Crowe and Frank V. Perry, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2014-2024.

management Frogram Committee, 1992), p2014-2024.
Piles Over Problems Sites, Issa S. Oweis and Edward M.
Zamiskie, Jr., CE Apr. 92, p62-64.
Pilot Study to Meet Drinking Water Regulations, Linda
Rae Leong, Patti P. Craddock and Carol Ruth James,
(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p504-509.

ed., 1992), p304-309.

Pollution Control Under the NPDES Stormwater Program, Thomas S. George and June Barrett-McDaniels, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645.

Proposal for Structural Design Peer Review, Rubin M. Zallen, CF Nov. 90, p208-215.

Chality Assurance in a Cask Fleet Parts Control System, Charles Fernandez, P. N. McCreery and L. B. Shappert, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1343-1348.

mittee, 1992), pl 343-1348.

Regional Planning for Stormwater Management, Thomas S. George and John P. Hartigan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p492-497.

Regulatory Considerations in Design of the Exploratory Studies Facility, Michael W. Parsons and Michael D. Voegele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p671-678.

Regulatory Perspective on Design and Performance Re-

A Regulatory Perspective on Design and Performance Requirements for Engineered Systems in High-Level Waste, Robert M. Bernero, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p813-821.

management Program Committee, 1992), p813-821.
Regulatory Requirements to Address Issues Related to Volcanism and Magmatism: Code of Federal Regulations, Title 10, Part 60, Disposal of High-Level Radioactive Wastes in Geologic Repositories, John S. Trapp and Philip S. Justus, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2039-2046.
Removing Incontives for Conflict, R. Wane Schneiter, CE Mar. 92, p6.

Roundtable Discussion Sessions, Thomas Wholley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p271-275.

A Storm Water Utility Case Study, Salt Lake City, Utah, Charles H. Call, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Uncertainty in Regulatory Decision-Making, D. Fehr-inger and S. Coplan, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p106-109.

Use of Annotated Outlines to Prepare Guidance for Li-cense Applications for the MRS and MGDS, John Roberts and William R. Griffin, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 21040-1045.

USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, R. Brad Jennings, Tim H. Raines and Lucia G. Colangione, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p56-61.

Validation, Acceptance and Licensing: How Much Scientific Facts Can the Process Digest? Clas-Otto Wene, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p110-115.

Water Reduction as Justification for Permit Backsliding, Gary W. Siegel and Margaret L. Dwyer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156.

Rehabilitation

Advantages of Installing Influent Fine Screens at a Large
Wastewater Treatment Plant, George G. Balog, Dave
L. Montgomery, Amarjit Sokhey, Manu A. Patel and
Norman R. Prima, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F.
Pierce Linawaver, ed., 1992), p287-290.

Alternative Study for the Breakwater and Fishing Pier
Rehabilitation at Playland Park, Rye, New York,
David W. Yang, Michael J. McCarthy, Edward J.
Schmeltz, Joseph Bonasia and Ralph Butter, Jr.,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p632-645.

Analysis of Slope Failure and Remedial Design of an
Earth Dam, Michael J. Mann and Robert E. Snow,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p923-939.

1992), p923-939.

Hitmore Waste Water Infrastructure a Health Plan, George G. Balog, Gary A. Wyatt and Edward Serp, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweare, ed., 1992), p429-432. Bridge Rehab is Bad Idea (ltr), Irwin Fruchtman, CE Feb. 92, p35.

92, p35.

Building Underpinning Key to Penn Station Rehab, CE
Oct. 92, p12-13.

Celanese Wastewater Treatment Plant Upgrade, William
R. Gluck, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p281-286.
A Chance Constrained Optimization Model Using Kinematic Wave Routing for Stormwater Infrastructure Re-habilitation, Timothy L. Jacobs and Miguel A. Medina,
Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p748-753.

Cleanup Efforts Continue at Oakland Fire Site, CE Feb.
92, p14.

Concrete for Sealing Voids in Rubble Structures, D. P. Simpson, B. D. Neeley and D. M. Walley, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p847-861.

post-1-501. Concrete Surface Treatments—A Selection Guide, P. James Bruner, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482. Contractor Watches Clock on Bridge Rehab, CE Sept. 92, 232.

p20. p20. Cost of Rehabilitation of Water Distribution Systems, Peter K. Mac Ewen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p770-771.

p710-771. CSO Rehabilitation Strategies for Urban Areas, Larry A. Roesner and Edward H. Burgess, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p654-660. Dallas Goes Trenchless, A. V. Almeida, CE Sept. 92, p71-73.

Dams Going Safely over the Top, R. Lee Wooten, George R. Powledge and Stephen L. Whiteside, CE Jan. 92, p52-54.

p52:5-34.

Decision Analysis Model for Well Rehabilitation and Groundwater Development, Moses Lake, Washington, R. H. Anderson, W. J. Roberds and D. Banton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p537-542.

Deck Modules Speed Work, Cut Bridge Rehab Cost, CE May 92, p10,12.

Deep Tangent Piles for Rebid Beaver Dam, CE July 92, p29.

Design Criteria and Specifications for Pipeline Rehabili-tation Projects, Lawrence I. Erdos, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad source—In Search of So. Karamouz, ed., 1992), p742-747.

Design of Irrigation Distribution System, Steve Robert-son, (Irrigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, Ted Engman, ed., 1992), p462-467.

esign-Basis Flood for Rehabilitation of Existing Dams, Anand Prakash, HY Feb. 92, p291-305.

Earthquake Support Grouting in Sands, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888.

Epoxy Helps Builders Adhere to Schedule, CE Mar. 92, p88.

Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

and Daniel M. rann, CO Mar. 32, p. 100-110.

A Face-Liff for Lincoln, Peter L. Rinaldi and Andrea Giorgi Bocker, CE Sept. 92, p62-64.
Field Trip—Cleveland East Breakwater Inspection, Thomas J. Bender, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p270-272.
Final Design and Construction of Gibralter, Dans

Final Design and Construction of Gibraltar Dam Strengthening, Noel C. Wong, Theodore B. Feldsher, Robert S. Wright and David H. Johnson, (Roller Com-pacted Concrete III, Kenneth D. Hansen, ed. and Fran-cis G. McLean, ed., 1992), p440-458. Future Trends and Needs in Hydraulics, Daryl B. Simons, HY Dec. 92, p1607-1620.

Geotextile Helps Tailor Old Rail Bed for New Use, CE

Jan. 92, p83. Guidelines for Rehabilitation of Civil Works of Hydro-electric Plants, Format: unbound, three-hole punched, Task Committee for the Preparation of Guidelines for Rehabilitation of Civil Works of Hydroelectric Plants, Hydropower Committee, American Society of Civil Engineers, (Ashok K. Rajpal, chmn.), 1992, 0-87262-889-2, 247pp.

High Strength, Low Permeability Garage Rehab Concrete, T. A. Holm and T. W. Bremner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p363-372.

Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, K. H. Frizell, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439. Hysteretic Response of Reinforced-Concrete Infilled Frames, Sinan Altin, Ugur Ersoy and Tugrul Tankut, ST Aug. 92, p2133-2150.

The Importance of Verified Simulation Model in a Sewerage Rehabilitation Program, Phil Wildbore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p730-735.

In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p334-339.

Innovative Rehab Celebrates 20th Year, CE June 92, p95. Life-Cycle Considerations in Urban Infrastructure Engineering, David Novick, ME Apr. 90, p186-196.

neering, David Novick, ME Apr. 90, p186-196. Low-Cost Computer Techniques for Steel Trass Bridge Rehabilitation and Ratings, Robert H. Kim and Jai B. Kim, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p786-793. Aoving Toward a Probability-Based Risk Analysis of the Benefits and Costs of Major Rehabilitation Projects, Daniel B. Taylor, Keith D. Hofseth, Leonard A. Shab-man and David A. Moser, (Risk-Based Decision Mak-ing in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p148-173.

Optimal Long-Term Scheduling of Bridge Deck Replacement and Rehabilitation, Timothy L. Jacobs, TE Mar/Apr. 92, p312-322.

Overlays on Deck, Paul Tarricone, CE Sept. 92, p42-45.

Planning, Assessing and Implementing Pipeline Rehabilitation Options, B. Jay Schrock, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741.

Planning for Water Conservation Through Irrigation System Modernization and Rehabilitation, A. K. Dimmitt, K. I. McLaughlin, F. Z. Kamand and D. G. Welch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299.

Ports '92, 2 volis., David Torseth, ed., 1992, 0-87262-874-4, 1212pp.

The Potential Fate of Particulate Contaminants from the Rehabilitated Ranger Uranium Mine, S. J. Riley and P. W. Waggitt, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p884-889.

Procedures for Evaluating Aggregate Gradation Specifications, Edwin C. Novak, Ir., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p261-274.

Progress and Developments in Dam Rehabilitation by Grouting, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p601-613.

Rail Revival, Paul Tarricone, CE Jan. 92, p36-39.

Rechab Helps Columbus Celebrate Anniversary, CE May 92, p10.

Rehab of Kentucky Covered Bridge Gets Boost from ASTE Members. FE Sect. 92, p77-78.

Rehab Helps Columbus Celebrate Anniversary, CE May 92, p10.
Rehab of Kentucky Covered Bridge Gets Boost from ASCE Members, CE Sept. 92, p77-78.
Rehaboling the Rails, Stewart D. Winn, Jr., CE Sept. 92, p54-57.
Rehabilitating Irrigation Systems from the 20th Century for the 21st Century, Gary L. Parker, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p281-285.
Rehabilitating Irrigation Systems with USDA Water Quality Programs, John D. Hedlund, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293.
Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p391-505.

J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p491-505.

Rehabilitation of Chloride Damaged Concrete, Christopher P. Hodges, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491.

Rehabilitation of Cocnrete Dams: Laboratory Simulation of Cracking and Injectability, G. Ballivy, K. Saleh, T. Mnif, J. Maniez, L. M. Landry and M. Nadeau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625.

Review of Current UK Techniques for Rehabilitating Water Mains, M. P. Jones, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p764-769.

Roller Compacted Concrete III, Kenneth D. Hansen, ed.

Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, 0-87262-862-0,

and Francis G. McLean, ed., 1992, 0-87262-862-0, 520pp.
Santa Cruz Dam Modification, Megan Metcalf, Timothy P. Dolen and Paul A. Hendricks, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p459-475.
Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p38-40.
Seismic Rehabilitation of Seattle's Pier 69, David Pierce and Ronald E. Martinson, (Ports '92, David Torseth, ed., 1992), p418-428.
Slope Remediation, Manfred R. Hausmann, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1274-1317.

Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049.

Standardizing Seismic Rehab, CE Sept. 92, p11.

Sylvan Beach Pier Rehabilitation Study, Peter W. Soltys, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662.

Traffic Impact Fees in Schaumburg, Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p170-174. Trenchless Repair Keeps Sewage and Business Flowing, CE Sept. 92, p94.

Trickle Channel Rehabilitation, Mark R. Hunter, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p504-509.

Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p. 397-414.

Tunnel Takes Cathodic Protection, Guang-Nan Fanjiang, Michael Mazzuca, Lin Nathan and Robin Pawson, CE Nov. 92, p59-61.

Urban Transportation Management—Jersey City, New Jersey, Suzanne Mack and Thomas Marchwinski, Sile Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), pl 43-147.

The U.S. Naval Facilities Offshore Platform Inspection, Maintenance, Repair and Rehabilitation Program, T. Regin and T. O'Boyle, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p531-545.

Water Main Rehabilitation Needs for the 1990's, D. Kelly O'Day, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p760-763.

Water Main Rehabilitation Using Silicote Lining, Steven E. Cooper and Gregory C. Heitzman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p772-773.

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, 0-87262-876-0,

When Sewer Rehab Doesn't Stop Basement Flooding, Thomas Rowlett and Kenneth Kelgard, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p648-653.

Bearing Capacity on Nonhomogeneous Cohesive Soils under Embankments, Radoslaw L. Michalowski, GT July 92, p1098-1118.

Construction of Grout-Impregnated Fabric-Reinforced Pipes, Robert Nicholls, CO June 92, p283-302.

Cyclic Behavior of End-Plate Moment Connections, Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2917-2930.

A Design Method for Reinforced Clay Embankments on Soft Foundations, Glen A. Roycroft, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1481-1492.

Design of Geosynthetic-Reinforced Soil Structures, Kh. Farrag and I. Juran, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 188-1200.

Designing Reinforced Rock, John A. Bischoff, Stephen J. Klein and Thomas A. Lang, CE Jan. 92, p64-67.

Effectiveness of Seismic Strengthening Techniques for Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1884-1902.

The Evolution of Geotextile Reinforced Embankments, C. Joel Sprague and Michael Koutsourais, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

Factors Influencing Passive Pullout Resistance, Joon-Ik Sohn, Soo-Il Kim, Young-Jin Kim and Dong-Deok Yoon, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1133-1162.

Juran, ed., 1992), pl 153-1162.

Finite Element Analysis of a Geogrid Reinforced Soil Wall, Richard J. Bathurst, Rajagopal Karpurapu and Peter M. Jarrett, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 213-1224.

Finite Element Analysis of Slopes with Layer Reinforcement, Robert M. Ebeling, John F. Peters and Reed L. Mosher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 427-1443.

Geosynthetic Reinforced Soil Structures, Dov Lesbchinsky and Rajph H. Boedeker, GT Oct. 89, pl 459-1478.

Geosynthetic Strength—Ultimate and Serviceability Limii State Design, R. J. Fannin and S. Hermann, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 411-1426.

Hysteretic Behavior of Anchorage Slip in RC Members,

1992), p1411-1426.

Hysteretic Behavior of Anchorage Slip in R/C Members, Murat Saatcioglu, Jaber M. Alsiwat and Guney Ozcebe, ST Sept. 92, p2439-2458.

Investigation of the Behavior of Reinforced Plastic Columns with Concrete Core, Saeed Daniali, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p666-676.

Moisture Effects on Flexural Performance of Wood Fiber-Cement Composites, Parviz Soroushian and Shashidhara Marikunte, MT Aug. 92, p275-291.

A New Design Chart for Reinforced Embankments, M. Soubra, C. Coulet and D. Rakotondramanitra, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1163-1174.

Out-of-Plane Seismic Response of Reinforced Masonry

Out-of-Plane Seismic Response of Reinforced Masonry Walls, Martin R. Button and Ronald L. Mayes, ST Sept. 92, p2495-2513.

Potential Gains Through Welded-Wire Fabric Reinforce-ment, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

92, p244-257.
Premature Failure of Externally Plated Reinforced Concrete Beams, Deric John Oehlers and John Paul Moran, ST Apr. 90, p978-995.
Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Triantafillou and Nikola Deskovic, ST May 92, p1270-1284.
Pullout Tests Using Steel Grid Reinforcements with Low-Quality Backfill, Dennes T. Bergado, Kam-Hung Lo, Jin-Chun Chai, Ramaiah Shivashankar, Marolo C. Alfaro and Loren R. Anderson, GT July 92, p1047-1063. 1063.

Reinforced Sand Behavior Overlying Compressible Subgrades, Gerald P. Raymond, GT Nov. 92, p1663-1680.

Retaining Wall With Reinforced Cohesionless Backfill, Swami Saran, K. G. Garg and R. K. Bhandar, GT Dec. 92, p1869-1888.

Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p956-959.

Softening and Snap-Through Behavior of Reinforced Elements, C. Bosco and A. Carpinteri, EM Aug. 92,

ability Analysis of Reinforced Embankments on Soft Soils, Shenbaga R. Kaniraj and Hasan Abdullah, GT Dec. 92, p1994-1999.

Dec. 74, p1994-1999.
Two Full Size Structures Reinforced by Geotextiles, Ph. Delmas, Ph. Gotteland, J. P. Gourc and S. Haidar, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1201-1212.

The Use of Vibro Systems in Seismic Design, Roberto A. López and Robert F. Hayden, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1433-1445.

Reinforcing steels

Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p.325-338.

Nonlinear Cyclic Behavior of Reinforcing Bars Including Buckling, Giorgio Monti and Camillo Nuti, ST Dec. 92, p.3268-3284.

Performance of Epoxy-Coated Steel in Continuously Re-inforced Concrete Pavement, Farrel J. Zwerneman, Rex C. Donahey, Hameed S. Syed and Srinivas R. Gunna, (Materials: Performance and Prevention of De-ficiencies and Failures, Thomas D. White, ed., 1992), a230, 325. p339-352.

Properties of Composites Using Recycled Plastics, Karim S. Rebeiz, David W. Fowler and Donald R. Paul, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381.

Rebar Corrosion in MgSO<sub>4</sub> Solution, Mohammad Sham-im Khan and Abdul-Hamid J. Al-Tayyib, MT Aug. 92, p292-299

Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p956-959.
Sprayed-Zinc Galvanic Anodes for the Cathodic Protection of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p732-746.
Strength and Corrosion Resistance of Superplasticized Concretes, Mohammed Maslehuddin, Rasheeduzzafar and Abdulaziz Ibrahim Al-Mana, MT Feb. 92, p108-113

A Theoretical Approach to Characterize Reinforced Con-crete Using Stress Waves, J. S. Popovics, J. L. Rose and A. Pilarski, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p492-504.

Relative density

Compaction of Granular Soils—Remarks on Quality Control, Michele Jamiolkowski and Erio Pasqualini, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p902-914.

Relaxation, mechani

Direct Analysis of Prestressed Concrete Members, A. S. Prasada Rao, ST Dec. 90, p3432-3447.

A Bayesian Reliability Approach to the Performance As-sessment of a Geological Waste Repository, John A. Flucek and Ashok K. Singh, *High Level Radioactive* Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p1625-1632.

Bayesian Reliability Updating of Existing Steel Girder Bridges, Sami W. Tabsh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

1992), p55-58.

Consistency and Reproducibility of Falling Weight Deflections, Christ van Gurp, (Road and Airport Pawent Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p291-305.

Electronic Spreadsheets in Structural Design, David O. Knuttunen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1187-

Entropy-Based Redundancy Measures in Water-Distribution Networks, Kofi Awumah, Ian Goulter and Suresh K. Bhatt, HY May 91, p595-614. Estimates of Extreme Wind Distribution Tails, J. A. Lechner, S. D. Leigh and E. Simiu, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p276-279.

Experiences with Experimental Design Schemes for Failure Surface Estimation and Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p252-255.

1992), p.252-255.

Extended Management Modeling Framework for Optimal Reliability-Based Design with Sampling Decisions, James Uber, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.532-536. Field Evaluation of Strain Gauges in Asphalt Concrete Pavements, Peter E. Sebaaly and Nader Tabatabaee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p.382-396.

Further Contributions to Reliability-Based Pile-Settlement Analysis, S. T. Quek, Y. K. Chow and K. K. Phoon, GT May 92, p726-742.

Groundwater Recovery Program for Southern California, Andrew Sienkiewich, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p242-247.

Incorporating Corrosion in Reliability-Based Design of Anchored Bulkheads, M. J. S. Roth, T. C. Sandford and H. J. Dagher, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992).

p160-163.

p160-163. International Harmonization of Reliability-Based Timber Engineering Design Codes, Jozsef Bodig, Michael Caldwell and Ronald W. Anthony, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-86. Laser Interferometric Characterization of Acoustic Emission Transducers, Douglas A. Bruttomesso and Laurence J. Jacobs, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p256-259.

Limit-State Interactions in Reliability-Based Design for Wood Structures, David Rosowsky and Bruce Elling-wood, ST Mar. 92, p813-827.

wood, ST Mar. 92, p813-827.
Maximum and Minimum Storage Trajectories That Meet Specific Risk Levels, Laura Fagherazzi, Jean-Claude Rassam and André Turgeon, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992), -294-303.

p.264-303.
Moisture Content and Reliability-Based Design for Wood Members, David V. Rosowsky and Kenneth J. Fridley, ST Dec. 92, p.3466-3472.
Offshore Pile System Reliability, Wilson H. Tang and Robert B. Gilbert, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1902), p.29-231

tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.228-231.

Optimal Discretization of Random Fields for SFEM, Chun-Ching Li and A. Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.29-32.

Optimal Upgrading of Hydraulic-Network Reliability, Lindell Ormsbee and Avner Kessler, WR Nov./Dec. 90,

p784-802.
Optimization-Availability-Based Design of Water-Distribution Networks, M. John Cullinane, Kevin E. Lansey and Larry W. Mays, HY Mar. 92, p420-441.
Probabilistic Design of Open Drainage Channels, Said M. Easa, IR Nov./Dec. 92, p868-881.
Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp.
Probabilistic Methods in Hydroproject Maintenance, Walter O. Wunderlich, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p514-519.

p514-519.

Regional Planning for Stormwater Management, Thomas S. George and John P. Hartigan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p492-497.

Reliability and Probability in Stability Analysis, John T. Christian, Charles C. Ladd and Gregory B. Baecher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1071-1111.

Reliability Model for Bridge Columns under Sciemic

1992), p10/1-111.
Reliability Model for Bridge Columns under Seismic Loads, Michel Ghosn and Ge Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p168-171.
Reliability Model for Soil Liner: Post Construction, I. Bogardi, W. E. Kelly and A. Bardossy, GT Oct. 90,

gardi, W. E p1502-1520.

gardi, W. E. Relly and R. Balassay, St. Sci. Sep. 1502-1520.

Reliability of Bolted Wood Connections, John J. Zahn, ST Dec. 29, p3362-3376.

Reliability of Controlled Structures Subject to Real Parameter Uncertainties, B. F. Spencer, Jr., C. Montemagno, M. K. Sain and P. M. Sain, (Probabilistic Mechanics and Structural and Goetechnical Reliability, K. Lin, ed., 1992), p369-372.

Reliability of Degrading Dynamic Systems with Applications, Mircea Grigoriu and Igor Rychlik, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p300-303.

Reliability of Operating Rules with or without Uncertain Forecasts, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p679-684.

Reliability of Portal Frames With Interacting Stress Re-sultants, Luis Miguel da Cruz Simões, ST Dec. 90, sultants, Lu p3475-3496

Reliability-Based Design for Feeeze-Thaw Concrete, J. M. Pitt, M. Seshadri and D. L. Covey, (Materials: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9462-475.

Reliability-Based Specification for Engineered Wood Construction, James R. Goodman, Allan G. Burk and David G. Pollock, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p73-77.

Reliability-Centered Management of Wood Transmission Lines, James M. Treat, Patrick J. Hasenoehrl and An-drew H. Stewart, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992).

Reservoir System Reliability Constrained by Natural Salt Pollution, Ralph A. Wurbs and Awes S. Karama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p661-666.

Risk Consistent Estimate of Heat-Straightening Applica-tions. I: Plates, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409.

Risk Consistent Estimate of Heat-Straightening Applica-tions. II: Beams, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426.

Robotics for Radioactive Waste Management in AEA Technology Facilities, S. A. Legg, A. Staples and C.A. H. Watson, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992, p980-984.

Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p38-40.

Serviceability Analysis of Wood Beams with Creep, David V. Rosowsky, Kenneth J. Fridley and Timothy A. Philpot, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90.

Simulation-Based Excursion Statistics, Gordon A. Fenton and Erik H. Vanmarcke, EM June 92, p1129-1145.

A Stochastic Approach to the Fatigue Reliability, Yuan Jie Lua, Wing Kam Liu and Ted Belytschko, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p324-327.

Stochastic Model for Pavement Design, K. H. Chua, A. Der Kiureghian and C. L. Monismith, TE Nov/Dec. 92, p769-786.

24, pro3-180.
Use of Reliability Methods for the Sequential Analysis of a Small Dam, Eric C. Drumm, Richard M. Bennett and William E. Manrod, III., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1126-1136.

Reliability analysis
Assessing the Reliability of the Water Supply to a Closed
Basin Wetlands, John C. Tracy and James K. Koelliker,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p445–450.

Assessing Time-Variant Bridge Reliability Due to Pier Scour, Peggy A. Johnson and Bilal M. Ayyub, HY June 92, p887-903.

Asymptotic Importance Sampling, Marc A. Maes, Karl Breitung and Philippe Geyskens, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p96-99.

Calibration Strategy for Urban Catchment Parameters, Yaacob Ibrahim and Shie-Yui Liong, HY Nov. 92, p1550-1570.

Conditional and Joint Failure Surface Crossing of Sto-chastic Processes, Øistein Hagen, EM Sept. 92, p1814-

Critical Issues Related to a Combined Probabilistic Numerical Analysis of Contaminant Transport in Porous Media, Jeffrey D. Cawlfield and Ming-Chee Wu, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p232-235.

Fatigue Life Variability and Reliability Analysis of a Wind Turbine Blade, Paul S. Veers, Herbert J. Sutherland and Thomas D. Ashwill, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p424-427.

Fatigue/Fracture Reliability and Maintainability of Struc-tural Systems: A Method of Analysis, C. J. Kung and P. H. Wirsching, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), and Geote p436-439.

and Geotechnical Retiability, Y. K. Lin, ed., 1992), p436-49.
Finite Element Dynamic Reliability Analysis with Condensation, Sankaran Mahadevan and Sandeep Mehta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p332-335.
Inspection Planning for Surface Fatigue Cracks, P. Friis-Hansen and H. O. Madsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p312-315.
Issues Related to the Transport of a Transportable Storage Cask After Storage, P. McConnell, T. L. Sanders, J. L. Brimhall, J. M. Creer, E. R. Gilbert and R. H. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180.
Mathematical Tool Set for SORM Reliability Methods, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p248-251.
Model Uncertainty Representation in Geotechnical Reli-

p248-251.

Model Uncertainty Representation in Geotechnical Reliability Analyses, Knut O. Ronold and Peter Bjerager, GT Mar. 92, p363-376.

On a Procedure to Estimate the Reliability of Mechanical Components, G. I. Schueller, C. G. Bucher and H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p451-454.

and Geotechnical Reliability, Y. K. Lin, ed., 1992), p451-454.

Optimal Configuration for Fiber Reinforced Composites under Uncertainties of Material Properties and Loadings, Yoshisada Murotsu, Mitsunori Miki and Shaowen Shao, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p547-550.

Optimal Importance-Sampling Density Estimator, George L. Ang. Alfredo H-S. Ang and Wilson H. Tang. EM June 92, p1146-1163.

Probabilistic Rotordynamics Analysis Using an Adaptive Importance Sampling Method, Y.-T. Wu, T. Y. Torng, O. H. Burnside and M. H. Rheinfurth, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p491-494.

Reliability Analysis of Creep and Shrinkage Effects, C. Q. Li and R. E. Melchens, ST Sept. 92, p2323-2337.

Reliability Analysis of Degrading Elasto-Plastic Oscillators, Igor Rychlik and Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p304-307.

Reliability Analysis of Partially Restrained Steel Connections, Gregory L. Tucker and Richard M. Bennett, ST App. 90, p1090-1101.

Reliability Analysis of Plates with Initial Deflection by Entropy Model Mivamura Assunce Vechan Vechanics Vechanics And Structure Vechanics Vechanics Partial Proposition (Proposition Proposition Pr

Apr. 70, p.1970-1101.
Reliability Analysis of Plates with Initial Deflection by Entropy Model, Miyamura Atsunori, Kohama Yoshiro and Takada Toyofumi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p559-562.

1992), p559-562.
Reliability Analysis of Uncertain Systems Under Random Loadings, Rwey-Hua Cherng and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p49-52.
Reliability Consideration in Shakedown Analysis, K. C. Chou and T. V. Galambos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p204-207.
Reliability of Nonlinear Frame Structures by SFEM, Achintya Haldar and Yiguang Zhou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p336-339.
K. Lin, ed., 1992), p336-339.
Response of Systems with Uncertain Parameters to Stochastic Eucliation, H. Jensen and W. D. Iwan, EM May 92, p1012-1025.

92, p1012-1025.

92, p1012-1025.

Response Variability and Reliability of Plates Using the Weighted Integral Method, Friedrich J. Wall and George Deodatis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p41-44.

Risk Analysis in Water Resources Engineering: Development and Application, Jacques G. Ganoulis, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p1-10.

Sampling Techniques for Time-Variant Reliability Problems, R. E. Melchers, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p100-103.

Sensitivity Evaluation of Simulation Methods for Reliability Assessment, Bilal M. Ayyub and Chao-Yi Chia, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p240-243.

Shakedown Limit State of Compact Steel Girder Bridges, M. G. Barker and T. V. Galambos, ST Apr. 92, p986-998.

998. A Statistical Method for the Reliability of Mechanical Components, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p440-442. Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-

Stochastic Finite Elements and Reliability Analysis, Lu-cia Faravelli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

and teoteconical regidentity, Y. K. Lin, ed., 1992), p45-48. Stochastic Model for Pavement Design, K. H. Chua, A. Der Kiurgehan and C. L. Monismith, TE Nov/Dec. 92, p769-786.

Der Klurgman and C. L. Monismith, 1E NOV-Dec. 22, p769-786.

Structural Reliability Analysis Methods for Implicit Performance Functions, Y.-T. Wu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p483-486.

Structural Reliability of Seismic Isolation System, Kazuta Hirata, Kenji Shirahama and Takahiro Somaki, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p57-60.

Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H.-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

Uncertainty and Reliability Analysis of Jacket Platform, A. Olufsen, B. J. Leira and T. Moan, ST Oct. 92, p2699-2715.

A Unified Simulation Approach to Structural System Reliability Analysis, Richard C. Turner and Michael J. Baker, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p104-107.

Use of Importance Sampling Constraints in System Opti-

Use of Importance Sampling Constraints in System Optimization, Yingwei Liu and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p112-115.

A. Lin, ed., 1992, p.112-115.
 Use of Interactive Simulation Environments for Evaluation of Water Supply Reliability, Larry M. Karpack and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p144-149.

Modular Robot Testbed, Chris Grasso, Wayne Jermstad, Mike Mathews, Jane Pavlich and Jim Avery, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453.

Supervision and Automatic Control of Robotic Systems in Nuclear Environments, J. Benner and K. Leinemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1922, p966-973.

gram Committee, 1922, p900-973. Use of Manned Submersibles to Investigate Slumps in Deep Water Gulf of Mexico, Earl H. Doyle, Michael J. Kaluza and Harry H. Roberts, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p770-782.

An Acoustic Impedance Method for Subbottom Material Characterization, Richard G. McGee and Robert F. Ballard, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1030-1035.

The Affordable Space Platform: The STS External Tank, Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p945-956.

ed. and Russell J. Miller, ed., 1992), p943-936. Applications of Remote Sensing to Drainage, Sun F. Shih, Edwin T. Engman and Christopher Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p547-552. Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.

Applications of Remote Sensing to Irrigated Agriculture, Christopher M. U. Neale and Richard H. Cuenca, (Irri-gation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p541-

Assessing Lunar Resources with Remote Sensing, Sandra C. Feldman and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p586-596.

Crop Classification and Area Estimation Using Airborne Multispectral Video/Radiometer Remote Sensing, Rashid H. Ahmed and Christopher M. U. Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p323-

3-28. Distant Look at Pollution, CE May 92, p13-14. GIS, Remote Sensing, and Master Water Plan: A Case Study, Uzair M. Shamsi, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p695-702.

p695-702. Introduction to Remote Sensing for Irrigation and Drainage, Edwin T. Engman and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p529-534. Land Use and Imperviousness Information Acquisition, Ming T. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowrik, ed., 1992), p363-368. Oakland Fire Fighters Guided by Satellites, CE Jan. 92, p83

p83.
Plot-scale Field Experiment of Surface Hydrologic Processes with EOS Implications, Charles A. Laymon, Emir J. Macari and Nicholas C. Costes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 2362-2362.

Rainfall Area Identification Using GOES Satellite Data, Ke S. Cheng and Sun F. Shih, IR Jan./Feb. 92, p179-190.

190.

The Remote Monitoring of Waste Glass Melter Product, K. K. Li and A. Schneider, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p533-540.

Remote Sensing Zeros in on River Spill, CE Aug. 92, p20. Telerobotic Field Geologist: Preliminary Results of a Feasibility Study, Robert E. Cole, Charlotte Albert-Thenet, G. Jeffrey Taylor, Paul Johnson, Forrest Buzan, Joy Ishigo and Curtis Ikehara, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1434-1442.

The Wide-Angle Optoelectronic Stereo Scanner WAOSS for the Soviet Mans 94/96 Missions, Rainer Sandau and Dieter Certel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2241-2251.

Cheering Up the Lumberjacks, CE Jan. 92, pl 1. Editor's Preface, Richard J. Seymour, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), pl-3.

1972, p1-3.
Facilitating Technology for Electric Power Generation, Ian Pope, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p276-292.

Menovation
Life-Cycle Considerations in Urban Infrastructure Engineering, David Novick, ME Apr. 90, p186-196.
Mining for Building Expansion, Richard M. Croswell, Robin B. Dill and John Booth, CE Dec. 92, p48-51.
Rehabbing the Rails, Stewart D. Winn, Jr., CE Sept. 92, p54-57.

Repairing

Analysis of Corroded Reinforced Concrete Sections for Repair, Ying-Su Yuan and Marton Marosszeky, ST July 91, p2018-2034.

Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p325-338.

Corps Unveils New Levee Repair Method, CE Aug. 92, p19-20.

Earthquake Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Gerald M. Serventi and Larry L. Scheibel, (*Ports '92*, David Torseth, ed., 1992), p429-442.

Earthquakes: A New Look at Cracked Masonry, Randolph Langenbach, CE Nov. 92, p56-58.

EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1656-1667.

Evaluation of Partial Depth Spall Repair Materials and Procedures, Arti J. Patel, David G. Peshkin and A. Russell Romine, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759.

Fill-Slope Failure and Repair, Robert W. Day, CF Aug. 92, p161-168.

Guidelines for Rehabilitation of Civil Works of Hydro-

Guidelines for Rehabilitation of Civil Works of Hydro-electric Plants, Format: unbound, three-hole punched, Task Committee for the Preparation of Guidelines for Rehabilitation of Civil Works of Hydroelectric Plants, Rehabilitation of Civil Works of Hydroelectric Plants, Hydropower Committee, American Society of Civil Engineers, (Ashok K. Rajpal, chmn.), 1992, 0-87262-889-2, 247pp. Histogram-Based Approach for Automated Pavement-Crack Sensing, K. R. Kirschke and S. A. Velinsky, TE Sept./Oct. 92, p700-710.

Sept. Oct. 32, p. 100-710.

Historic Seawalls of the Boston Harbor, Massachusetts Region: Evolution, Construction and Repair, David B. Vine and Peter S. Rosen, (Ports '92, David Torseth, ed., 1992), p849-867.

Limited Compaction Grouting for Retaining Wall Repairs, Michael J. Byle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p288-300.

Military Techniques for Expedient Repair of Earthquake Damaged Harbor Infrastructure, Lyndell Z. Hales and Ivan L. Sheall, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p370-386.

Optimal Allocation of Resources in Repair and Mainte-nance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4.

Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1055-1068.

p103-1008.

Pavement Surface Maintenance: Overview of SHRP H106 Experimental Installations, Russell Romine, David
Peshkin, Kelly Smith and Tom Wilson, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p146-159.

Perils of Point Loma, John Prendergast, CE Nov. 92,

Recent Progress in American Pinpile Technology, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p765-777.

Rehabilitation of Chloride Damaged Concrete, Christo-pher P. Hodges, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491.

eu., 1992), p463-491. Replacement of a Deteriorated Steel Sheet Pile Bulkhead, Vincent G. Miller and Vladimir Ostrov, (Ports '92, David Torseth, ed., 1992), p826-835. Re-Qualification of Offshore Platforms, R. G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p427-443.

Risk Consistent Estimate of Heat-Straightening Applica-tions. I: Plates, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409.

Risk Consistent Estimate of Heat-Straightening Applica-tions. II: Beams, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426.

and R. Richard Avens, 51 Dec. 72, p.3410-3-20.
Roof Management Alternatives for Aging Launch Infra-structure, Dennis Firman, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2056-2063.

Seismic Repair at Seventh Street Marine Terminal, John A. Egan, Robert F. Hayden, Larry L. Scheibel, Mahmut Otus and Gerald M. Serventi, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p867-878.

Settlement, Structural Failure, and In-place Repair of Above Ground Storage Tanks, Richard M. Berry and Robert P. Buhrow, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, xd. and Ilan Juran, ed., 1992), p240-251.

Solving MWRA's Supply Issues Through Conservation, Marcis Kempe, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p163-

168.
Standard Methodologies for the Forensic Investigation of Pavements, James O'Kon, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p31-38.
Terminal Asphalt Patching: An Innovative Approach, C. Davis Rudolf, Ill. and George Degaraff, (Ports '92, David Torseth, ed., 1992), p38-6-848.
When Sewer Rehab Doesn't Stop Basement Flooding, Thomas Rowlett and Kenneth Kelgard, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p648-653.

Repeated loading Reinforced Sand Behavior Overlying Compressible Subgrades, Gerald P. Raymond, GT Nov. 92, p1663-1680.

Draft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Toseth, ed., 1992), p939-1000.

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE Ports and Harbors Task Committee (Paper Prepared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster), (Ports '92, David Torseth, ed., 1992); a 1754. 1154. 1992), p1070-1151.

EPA Responds to Report Saying its Research is Inad-equate, NE Apr. 92, p5. Plan Estimates Cost of Getting 'Smart', CE Oct. 92,

p24,27.

Planning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik), (Ports '92, David Torseth, ed., 1992), p937-938.

ed., 1992), p937-938.

Planning and Design Guidelines for Small Craft Harbors—Economics and Finance, ASCE Ports and Harbors Task Committee (Paper Prepared by Lawrence E. Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports '92, David Torseth, ed., 1992), p1152-1183.

Return of the Master Builders, Jeffrey Beard, CE June 92,

p116.

ASCE President Tells House Panel More Transportation Research Funds are Needed to Revive U.S. Infrastructure, NE Apr. 92, pl.

Berkeley Profs Seek Better Fire Protection for Offshore Platforms, NE Feb. 92, p16.
Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p308-

A Challenge for Research, Robert B. Harris, CO Sept. 92, p422-434.

Closed Cycle Ocean Thermal Energy Conversion, F. A. Johnson, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p70-108.

Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1037-1054.

The Cold Truth About Landfills, CE Jan. 92, p11.

Conference Dedication to Jerome M. Raphael, Eric B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p1-4. Corps Adds 12 Projects to Joint-Venture Program, CE Nov. 92, p27.

Design Criteria for Ferry Landings, Charles T. Jahren, Ralph Jones and Seiichiro Ishii, (Ports '92, David Tor-seth, ed., 1992), p493-505.

The Design of a Permanent Lunar Research Station, James R. Thomas, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212.

Enhancing Decision Analysis Techniques for Lunar Base Construction Research, Walter W. Boles and David B. Ashley, Cangineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p341-349.

Evolution of the French Policy Related to the Studies on Long-Lived Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e49-51.

High Level Radioactive Waste Management Program Committee, 1992), p49-51.

Family Establishes New Program for CERF—and Lasting Tribute to Ken Roc, NE Apr. 92, p3.

Global Change: Geoengineering and Space Exploration, Lyle M. Jenkins, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2072-2081.

Hazwaste May Leave Like a Jet Plane, CE Oct. 92, p14.

HLW Immobilization in Glass: Industrial Operation and S. Runge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p566-573.

International Harmonization of Reliability-Based Timber Engineering Design Codes, Jozsef Bodig, Michael Caldwell and Ronald W. Anthony, (Probabilistic Mechanicand Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-86.

Keeping Computers from Crashing, CE Feb. 92, p12.

ana Structura ana Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-86.

Keeping Computers from Crashing, CE Feb. 92, p12.

LIAC: A Closed Ecosystem Research Facility, Derek E. Shipley, Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1765-1776.

Mechanical Properties of High Performance Concretes, Shuaib H. Ahmad, Paul Zia, Mike Leming and M. R. Hansen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p864-867.

New Facility Allows Large-Scale Tests of Soil-Nailed Walls, CE June 92, p20,22.

New Infrastructure Center Formed, CE Mar. 92, p8.

A Novel University-Industry-Government Partnership, Constantine N. Papadakis, Paul C. Claspy, Theo G. Keith and Michael J. Salkind, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2128-2135.

Stein Sture, ed. and Russell J. Miller, ed., 1992), p2128-2135.

NRC Offers Research Awards, CE Feb. 92, p12.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, Dinesh C. Gupta, Jacob Philip, Loren J. Lorig and Asadul H. Chowdhury, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p212-219.

A Pilot Sounding Rocket Project Utilizing Student Labor, Sue A Lohoson, (Engineering Construction, and Operation).

A Pilot Sounding Rocket Project Utilizing Student Labor, Sue A. Johnson, Emgineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2317-2327.

A Proposed Methodology for Ranking Space Resource Utilization Processes, R. D. Waldron and A. H. Culler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p690-703.

Public Attitudes About Radioactive Waste, Annagement, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p691

Committee, 1992), p1-3.

The Roads Ahead, Teresa Austin, CE Apr. 92, p54-57.

Robotic Platform May Change Crane Design, CE Oct. 92, p13-14.

Robotic Platform May Change Crane Design, C.E. Get. 7c, p13-14.

Rush of Legislation Concludes 102nd Congress, Casey Dinges, CE Dec. 92, p112.

Seasonal Monitoring of Pavements—A Whole Lot More, Cheryl Allen Richter, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p182-195.

The SHRP-LTPP Asphalt Resilient Modulus Pilot Study, William O. Hadley and Jonathan L. Groeger, (Materializ Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p130-145.

Space Station & Lunar/Mars Life Support Research, Winston Huff. (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p180-1700.

State of the Art in Open-Cycle Ocean Thermal Energy Conversion, Michel Gauthier, Jean Marvaldi and Federica Zangrando, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p109-151.

State of the Art in Other Ocean Energy Sources, Richard J. Seymour and Preston Lowrey, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), ery: the St p258-275.

Systems Analysis in Water-Distribution Network Design: From Theory to Practice, I. C. Goulter, WR May/June 92, p238-248.

92, p.230-248.
Technology Issues for Enhancing Waste Material Utilization in Highway Construction Addressed by the
SHRP-IDEA Program, K. Thirumalai, (Utilization of
Waste Materials in Civil Engineering Construction,
Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed.,
1992), pl-8.

Thaw Weakening Research at the Minnesota Road Re-search Project, Michel J. Hovan and David E. New-comb, (Road and Airport Pavement Response Monitor-ing Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p138-152.

Eaton, ed., 1992), p138-152.

The Theory of Elasticity: 1950-1992 and Beyond: Concluding Remarks, Lawrence E. Goodman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p637-639.

Waste Caretakers: Who Will They Be? A. Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1485-1490.

Wave Effects on Offshore Structures—Some Beauty Research Program Committee, 1992, p1485-1490.

Wave Effects on Offshore Structures—Some Recent Re-search, Michael Isaacson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p381-426.

Research and development CERF Draws Construction Lessons from Japan, CE Mar. 92, p26-27.

CERF Will Measure U.S. R&D Trends, CE Aug. 92, p8. Corps Seeks Industry Partners, CE Feb. 92, p12

Corps Seeks Industry Partners, CE Peb. 92, p12.
Corrosion Lifetime Assessment for Candidate Materials
of Geological Disposal Overpack for High-Level Nuclear Waste Canisters—Perspective of R&D in Japan,
Hidekazu Asano, Hisao Wakamatsu and Masatsune
Akashi, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p1658-1669.

Ecological Sustainable Development—A Place in the Sun for Nuclear Energy? Carole Palmer, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p1470-1477

Education and Research in Japan's Construction Indus-try, Antonio Nanni, Hikaru Takeuchi and Kazuhisa Yahagi, El July 92, p284-293.

French High-Level Waste Management Research and Development Program, J. P. Moncouyoux and C. G. Sombret, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409.

Japan's R&D Success Story: Report Tells How They Do It, NE Jan. 92, p3.

Materials Key to Rehab, Conference Speakers Say, CE Oct. 92, p11-12. A New Era In Transportation, John Prendergast, CE Apr. 92, p38-41.

Nondestructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992, 0-87262-887-6, 235pp.

R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16. The Roads Ahead, Teresa Austin, CE Apr. 92, p54-57.

air rossos Anead, Ieresa Austin, CE Apr. 92, p54-57. Specs May be Written for Trenchless Construction, CE July 92, p29. Start-Ups, CE Aug. 92, p8. Start-Ups, CE Aug. 92, p8. State of the Art in Wave Power Recovery, A. Douglas Carmichael and Johannes Faines, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p182-212.

Strategies for Technology Push: Lessons from Construc-tion Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.

Sept. 92, p301-328. Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1298-1302.

Tort Liability: Limiting U.S. Innovation, Harvey M. Bernstein, CE Nov. 92, p6. Underground Research: Here and There, Raymond L. Sterling, CE Dec. 92, p56-58.

Visualization of Groundwater Contaminant Parameters, Gregory D. Comes, James Warner and S. Paul Miller, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1177.

Research management EPA Responds to Report Saying its Research is Inad-equate, NE Apr. 92, p5.

Research needs

Competitive Bids May Hamper R&D (ltr), Thomas Rogers, CE Feb. 92, p31-32. Panel Calls for National Wind Engineering Program, CE

Dec. 92, p18. Progress Report ARS/SCS Runoff Curve Number Work Group, D. E. Woodward and W. J. Gburek, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p378-382.

Research Needs Related to Forensic Engineering of Con-structed Facilities, Julie Mark Cohen, W. Gene Corley, Ping K. Wong and John M. Hanson, CF Feb. 92, p3-11.

Reservoir design
Predicting Sediment Loads, Krishan P. Singh and Ali
Durgunoglu, CE Oct. 92, p64-65.

Reservoir operation

Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-

A Demand Driven Decision Support System for Opera-tion of Reservoirs, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p561-566.

Development of a Phase I Prescriptive Reservoir Model, Robert D. Carl, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p667-

672

612. Global Warming and Possible Effects on the Central and Southern Florida Project, James W. Vearil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad ened Resource-In Search of Karamouz, ed., 1992), p13-18.

Karamouz, ed., 1992), p13-18.

An Innovative Institutional Arrangement Which Incorporates the Risk Preferences of Water Users, Norman J. Dudley, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p174-199.

Integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, B. A. Miller, V. Alavian, M. D. Bender, D. J. Benton, P. Ostrowski, Jr., J. A. Parsily and M. C. Shaio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p563-568.

Issues in Hydropower Modeling Using GEMSLP Algorithm, K. K. Reznicek and S. P. Simonovic, WR Jan/Feb. 92, p54-70.

Managing Existing Reservoirs to Meet New Challenges,

Managing Existing Reservoirs to Meet New Challenges, Morris Israel and Jay R. Lund, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p673-678.

Maximum and Minimum Storage Trajectories That Meet Specific Risk Levels, Laura Fagherazzi, Jean-Claude Rassam and André Turgeon, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992),

p284-303.

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertain-ties of Sediment Transport Parameters, Carlos C. Carriaga and Larry W. Mays, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p526-531.

Multireservoir Sewer-Network Control via Multivariable Feedback, A. Messmer and M. Papageorgiou, WR Nov./Dec. 92, p585-602.

Operation of Large Multireservoir Systems Using Opti-mal-Control Theory, Numan R. Mizyed, Jim C. Loftis and Darrell G. Fontane, WR July/Aug. 92, p371-387.

Operation of the Tennessee Valley Authority Water Con-trol System Under Extreme Drought Conditions, H. Morgan Goranllo, Jr., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-365.

Engman, ed., 1992, p.360-365.
Optimization and Simulation of Multiple Reservoir Systems, Mohammad Karamouz, Mark H. Houck and Jacque W. Delleur, WR Jan./Feb. 92, p71-81.
Optimization of Real-Time Hydrothermal System Operation, William W.-G. Yeh, Leonard Becker, Shi-Qian Hua, De-Pu Wen and Jian-Min Liu, WR Nov/Dec. 92, p636-653.

posto-53.

Performance Evaluation of Lake Shelbyville by Stochastic Dynamic Programming, Han-Lin Lee, Jon C. Liebman and E. Downey Brill, Jr., WR Mar./Apr. 92, p185-204.

man and E. Downey Brill, Jr., WR Mar/Apr. 92, p185-204. Operation of a Multi-Reservoir Water Distribution System, Ali Diba, Peter W. F. Louie, Manouchehr Mahjoub and William W-G. Yeh, (Water Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p316-321.

Planning Simulation Model of Irrigation District, Jesús Chávez-Morales, Miguel A. Mariño and Eduardo A. Holzapfel, IR Jan.Feb. 92, p74-837.

Prescriptive Model for Missouri River Reservoir-operation Analysis, David T. Ford, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p355-560.

Real-Time Operation of Tanshui River Reservoirs, Jan-Tai Kuo, Nien-Sheng Hsu, Wen-sen Chu, Shian Wan and Youn-Jan Lin, WR May/June 90, p349-361.

Release Alternatives on a 3-D Salinity Simulation, Bernard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-242.

242

242.
242.
Reliability of Operating Rules with or without Uncertain Forecasts, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p679-684.
Reservoir Operating Rules for Maximum Hydropower Production, Emmanuel U. Nzewi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p543-548.
Reservoir Sedimentation. II: Reservoir Desiltation and

Karamouz, ed., 1992), po43-248.

Reservoir Sedimentation. II: Reservoir Desiltation and Long-Term Storage Capacity, Jiahua Fan and Gregory L. Morris, HY Mar. 92, p370-384.

Reservoir Systems Analysis: Closing Gap Between Theory and Practice, Slobodan P. Simonovic, WR May/June 92, p262-280.

72, p.20-200.

Session Report—Natural and Man-Made Hazards and Risk of Extreme Events, Jim Lambert, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p.358-359.

Simulation of Reservoir Operation Using Smart Reservoirs, Jon S. Behrens, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p606-613.

eservoir perfora

Reservoir performance Predicting Sediment Loads, Krishan P. Singh and Ali Durgunoglu, CE Oct. 92, p64-65. Reservoir Sedimentation. II: Reservoir Desiltation and Long-Term Storage Capacity, Jiahua Fan and Gregory L. Morris, HY Mar. 92, p370-384.

Reservoir sedimentation
Adequacy of Surface Water-Supply Systems: Case Study,
Krishan P. Singh, Sally M. Broeren and Ali Durgunoğlu, WR Nov/Dec. 92, p620-635.
Reservoir Sedimentation. I: Delta and Density Current
Deposits, Jiahua Fan and Gregory L. Morris, HY Mar.

Reservoir Sedimentation. II: Reservoir Desiltation and Long-Term Storage Capacity, Jiahua Fan and Gregory L. Morris, HY Mar. 92, p370-384.

Reservoir storage
The 1991 Revolution in Water Management, George R.
Baumli, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p322-327.

Adequacy of Surface Water-Supply Systems: Case Study, Krishan P. Singh, Sally M. Broeren and Ali Dur-gunoğlu, WR Nov./Dec. 92, p620-635.

Development of Storage Demand Relation for Reservoirs—A Probabilistic Approach, Hormoz Pazwash, (Water Resource- Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p549-554.

Overtopping Protection Alternatives for Dams, Noel R. Oswalt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1210-1215.

Technology Transfer Lessons from a U.S. Water District, Douglas Welch and Karen McLaughlin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p203-208. -In Search of

Water Supply Operations During Drought, Jhih-Shyang Shih and Charles ReVelle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p310-315.

Optimization and Simulation of Multiple Reservoir Sys-tems, Mohammad Karamouz, Mark H. Houck and Jacque W. Delleur, WR Jan./Feb. 92, p71-81.

Reservoir System Reliability Constrained by Natural Salt Pollution, Ralph A. Wurbs and Awes S. Karama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p661-666.

Reservoir Systems Analysis: Closing Gap Between Theory and Practice, Slobodan P. Simonovic, WR May/June 92, p262-280.

### Reservoirs

Aggregation-Disaggregation Approach to Multireservoir Operation, Juan B. Valdés, Jenny Montbrun-Di Filip-po, Kenneth M. Strzepek and Pedro J. Restrepo, WR July/Aug. 92, p423-444.

Agricultural Drains and Safety of Dams, James M. Verzuh and Glen D. Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p51-56.

Aspects of Parallel Processing in Reservoir Simulation, Richard Ewing, Patrick O'Leary and James Sochacki, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p111-114.

Behavior of Thermal Wedges in Oscillating Reservoir Flow: A Case Investigation, Vahid Alavian, Neil Suth-erland and Ming Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p501-506.

BRASS Modeling of Loiza Reservoir, Puerto Rico, for Sediment Management Operations, Gregory L. Morris, Raul Colón, Robert Laura and G. T. Anderson, (Water Resources Planning and Management: Saving a Threat-end Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p837-842.

Channel Restoration Above Elephant Butte Reservoir, Christopher A. Gorbach, (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p114-119.

Climate Change and Water Management Flexibility, Lin-da L. Nash, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-522.

Climatic Change and Ensuing Risks Facing Water Re-sources Managers, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992),

Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Faeh and Géraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1112-1117.

Density Currents Entering Lakes and Reservoirs, Vahid Alavian, Gerhard H. Jirka, Richard A. Denton, Marc C. Johnson and Heinz G. Stefan, HY Nov. 92, p1464-

Design and Performance of Bath County Upper Dam and Reservoir Slopes, K. L. Wong, D. E. Kleiner, A. M. Wood, M. C. Geary and R. G. Oechsel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p371-

386.

Bestruction of Stratification By Bubble Plume, W. D. Baines and A. M. Leitch, HY Apr. 92, p559-577.

Dynamic Effect of Sediment on Dam Hydrodynamics, Bang-Fuh Chen, Kuo-Chyang Chang and Tin-Kan Hung, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p345-348.

Efficiency of Jet Mixing of Temperature-Stratified Water, Heinz G. Stefan and Ruochuan Gu, EE May/June 92, p363-379.

Heinz G. Stefan and Ruochuan Gu, EE May/June 92, p363-379. 
Expert System for Operating A Treated Water Supply System, Kent Keqiang Mao, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p867-871. 
Global Climate Change Effects on Water Quality, G. K. Meyer and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p19-24. 
HEC-6 Modeling of Sediment Management in Loiza Reservoir, Puetro Reico, Gregory L. Morris and Guangdou Hu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p630-635. 
Hydraulic Risk of Flood Disaster Reduction at Dams, Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p549-556.

556.
Landslide-Generated Waves in Reservoirs, C. J. Tang and J. F. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p220-223.
Modeling of a Large-Scale Water Distribution System, Nien-Sheng Hsu, Peter W. F. Louie and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p598-603.
Modeling Variable Width Buffer Zones with a Geographic Information System, Gary Ostroff, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p21-218.
Multiobjective Analysis of Multireservoir System, S. Mohan and Diwakar M. Raipure, WR July/Aug, 92, p356-370.

p356-370.

p336-370. Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p952. Numerical Modeling of Withdrawals at Large Dams, Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p341-346.

340.
Performance Evaluation of Lake Shelbyville by Stochastic Dynamic Programming, Han-Lin Lee, Jon C. Liebman and E. Downey Brill, Jr., WR Mar/Apr. 92, p185-204.

Physical and 2-D Computer Models of Skimmer Curtain Effects on Lewiston Reservoir and Outlet Temperatures, Russ T. Brown, Gus Yates and Perry Johnson, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p507-513.

Pinhole Test for Identifying Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284.

Predicting Sediment Loads, Krishan P. Singh and Ali Durgunoglu, CE Oct. 92, p64-65.

Preliminary Sizing of Detention Reservoirs to Reduce Peak Discharges, Bruce M. McEnroe, HY Nov. 92, p1540-1549.

pl540-1549.
Reservoir Management and Thermal Power Generation,
Barbara J. Lence, M. Imran Latheef and Donald H.
Burn, WR July/Aug. 92, p388-405.
Reservoir Sedimentation. I: Delta and Density Current
Deposits, Jiahua Fan and Gregory L. Morris, HY Mar.
92, p354-569.

Reservoir Sedimentation. II: Reservoir Desiltation and Long-Term Storage Capacity, Jiahua Fan and Gregory L. Morris, HY Mar. 92, p370-384.
Reservoir Water Quality Modeling in Northern Portugal—Some Case Studies, A. C. Rodrigues and G. T. Oriob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p804-869.
Turning on the Waterworks, Donaid E. Eckmann, CE Aug. 92, p48-51.
Use of Density Current to Modify Thermal Structure of TVA Reservoirs, Vahid Alavian and Pete Ostrowski, Jr., HY May 92, p688-706.
Water-Balance Model of Two Conservancies in Guyana, Le Beer and L. Bacchus, IR July/Aug. 92, p513-519.
Ju de Beer and L. Bacchus, IR July/Aug. 92, p513-519.
Junenez and M. Hanif Chaudhry, EY Dec. 92, p180-193.

Residence tir

Residence time Longevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, Bruce D. Marsh and Ronald G. Resmini, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2025-2032.

ment Program Committee, 1972, passes of Residential location Multi-Stage Diffused Bubble Aeration System for the Removal of Volatile Organics and Radon, a Case History, A. David Marino and Jerry Lowry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p581-586. Price Effects of Landfills on Residential Land Values, Arthur C. Nelson, John H. Genereux and Michelle Generux, UP Dec. 92, p128-137.

Residential streets
Commuter Infiltration, The Unaddressed Issue, Thomas
J. Boyd and T. C. Sutaria, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed.,
Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6771.

Residual soils
Influence of Structure and Composition on Residual
Soils, Laurence D. Wesley, GT Apr. 90, p589-603.
Lateral Analysis of Piers Constructed on Slopes, Mohammed A. Gabr and Roy H. Borden, GT Dec. 90, p1831-

Strength Correlation Factor for Residual Soils, N. Lo-ganathan, Suraj de Silva and A. Thurairajah, GT Apr. 92, p593-610.

Residual strength
Comparison of Field and Laboratory Residual Strengths,
Timothy D. Stark and Hisham T. Eid, (Stability and
Performance of Slopes and Embankments II, Raymond
B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-

Investigation of Mackay Dam Following the 1983 Borah Peak Earthquake, Leslie F. Harder, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p956-

972.

Kettleman Hills Waste Landfill Slope Failure. I: LinerSystem Properties, James K. Mitchell, Raymond B.
Seed and H. Bolton Seed, GT Apr. 90, p647-668.

Modeling of Lateral Spreads in Silty Sands by Sliding Soil
Blocks, Ricardo Dobry and Mohammad H. Baziar,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p625-652.

Petton Landslide: An Unusual Double-Wedge Failure,
Derek H. Cornforth and D. Andrew Vessely, (Stability
and Performance of Slopest and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992),
p310-324.

Residual Strength of Structural Components Subjected to Cyclic Loads, Deric John Oehlers, ST Oct. 92, p2645-2658.

2658.
Seismic Retrofit Analysis of a Homogeneous Earthfill Dam, Suji Somasundaram, Kris S. Khilnani and Geoffrey R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p669-684.
Seismic Stability and Permanent Deformation Analyses: the Last Twenty Five Years, W. F. Marcuson, III., M. E. Hynes and A. G. Franklin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p552-592.

Steady-State Strength Analysis of Lower San Fernando Dam Slide, Gonzalo Castro, Raymond B. Seed, Thom-as O. Keller and H. Bolton Seed, GT Mar. 92, p406-427.

Residual stress
Compression Tests of Cold-Formed Steel Columns, C. C. Weng and Teoman Pekoz, ST May 90, p1230-1246.
Damage Dependent Micromechanics in Metal Matrix Composites, R. H. Jones, D. H. Allen and J. G. Boyd, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p99-102.
The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, Marek-Jerzy Pindera and Alan D. Freed, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272.
On the Influence of Seismically Induced Residual Forces on Bridge Abutment Design, Raj Siddharthan and Mahmoud El-Gamal, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p51-54.

p51-54.

p51-54.

Out-of-Piane Strengths of Steel Beams, S. Bild, G. Chen and N. S. Trahair, ST Aug. 92, p1987-2003.

Residual Stress Mitigation Considerations for Waste Package Design and Closure, E. S. Robitz, Jr. and T. W. Doering, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p377-384.

Residual Stresses in Cold-Formed Steel Members, C. C. Weng and Teoman Pekoz, ST June 90, p1611-1625.

Study on Maximum Strength of Cold-Formed Steel Cold-

Study on Maximum Strength of Cold-Formed Steel Col-umns, C. C. Weng and C. P. Lin, ST Jan. 92, p128-146.

Conference Promotes Polymer Concrete Rehab, CE May 92, p21-22.

Effects of Freezing on Impact Properties of RTM Com-posites, and Their Applications in Offshore Structures, Gregory J. Pope and Vistasp M. Karbhari, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), 822-839.

Modeling Shallow Overland Flow in Surface Irrigation, B. L. Maheshwari and T. A. McMahon, IR Mar/Apr. 92, p201-217.

Resistance coefficients
Dimensionally Homogeneous Manning's Formula, Ben
Chie Yen, HY Sept. 92, p1326-1332.
Field-Measured Hydraulic Resistance Characteristics in
Vegetation-Infested Canals, Mohamed F. Bakry, Timothy K. Gates and Ahmed F. Khattab, IR Mar./Apr. 92,
p256-274.

ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST

Apr. 92, p1056-1070.

Commentary on Proposed Specification for Structural Steel Beams with Web Openings (with Design Example), ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3325-3349.

conomical LRFD Composite-Beam Design from HESCO, John Cook and Roger Blais, CC May 92, p1-Economical

3,7-11

Inelastic Limit States Design. Part I: Planar Frame Stud-ies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

G. Deiertein, S1 Sept. 92, p.2.32-22-39.

Inelastic Limit States Design. Part II: Three-Dimensional Frame Study, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p.2550-2568.

Load Duration and System Effects in LRFD for Wood Construction, David V. Rosowsky and Bruce R. Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.78-81.

Proposed Specification for Structural Steel Beams with

Proposed Specification for Structural Steel Beams with Web Openings, ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3315-3324.

Reliability-Based Specification for Engineered Wood Construction, James R. Goodman, Allan G. Burk and David G. Pollock, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p73-77.

Transportation of Demineralized Water: Case Study, Ali A. Quraishi and Muhammad S. Al-Amry, TE July/Aug. 92, p576-585.

Resonance
A Dual Approach to Low Frequency Energy Definition in
a Small Craft Harbor, Chuck Mesa, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p400-

Stiffness Coefficients of Layered Soil Systems, A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624.

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

stesource allocation Crack Filling Goes Mobile, CE Apr. 92, p17-18. Levels of Service Applied to Urban Streams, H. Rooney Malcom and Cynthia C. Lancaster, WR July/Aug. 91, p482-497.

Optimal Allocation of Resources in Repair and Mainte-nance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4.

Resource development

Assessing Lunar Resources with Remote Sensing, Sandra C. Feldman and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p586-596.

Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 139-1149.

Beneficiation of Lunar Rocks and Regolith: Concepts and Difficulties, Lawrence A. Taylor and David S. McKay, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 058-1069.

Evaluation of Processing Options for Lunar Oxygen Production, Andrew Hall Cutler and Robert D. Waldron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p704-713.

Extraterrestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillett and David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1048-1057.

Russell J. Miller, ed., 1992), p1048-1037.

In Situ Recovery of Water from Dormant Comet Cores & Cl Carbonaceous Chondrites, David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2367-2381.

Miller, ed., 1992), p2367-2381.

INTERLUNE Concept for Helium-3 Fusion Development, Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p804-814.

Linar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p739-731.

Mars Mission Designs: Comparing the Near Term Options, Malcolm A. LeCompte and Julie P. Stets, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p726-738.

Mars Via the Moon—A Robust Lunar Resources-Based Architecture, Ed Repic and Wally McClure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1603-1630.

A Modified Sulfate Process to Lunar Oxygen, Thomas A. Sullivan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p641-650.

On the Beneficiation and Comminution of Lunar Rego-lith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138.

Production of Lunar Oxygen, Iron, Magnesium, and Silicon by Aqueous Hydrofluoric Acid Leaching, William N. Agosto, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p678-689.
Steam Injection System for Lunar Concrete, Dennis M. Pakulski and Kenneth J. Knox, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1347-1358.
Sulfur as a Lunar Resource G. Heiken D. Vanimos and

Sulfur as a Lunar Resource, G. Heiken, D. Vanim

Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and H. Hawkins, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564.
Vacuum Melting and Mechanical Testing of Simulated Lunar Glasses, J. E. Carsley, J. D. Blacic and B. J. Plet-ka, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1219-1231.

Resource management
Conflicts in Health and Safety Matters: Between a Rock
and a Hard Place, Richard C. Schwing, (Risk-Based Decision Making in Water Resources V, Yacov Y,
Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p135-147.

Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), pl35-147.

Indigenous Resource Utilization in Design of Advanced
Lunar Facility, Larry S. Bell, Michael G. Fahey, Todd
K. Wise and Paul C. Spana, AS Apr. 92, p230-247.

Lunar Resource Base, John Pulley, Todd K. Wise, Claude
Roy and Phil Richter, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p483-492.

Materials and Structures Synergistic with In-Space Materials Utilization, Kumar Ramohalli, Farhang Shadman
and K. R. Sridhar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p714-725.

A Proposed Methodology for Ranking Space Resource
Utilization Processes, R. D. Waldron and A. H. Cutler,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p690-703.

Regulatory Law and Policy to Support Space Mining,
Bruce S. Marks and William R. Sharp, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p2208-2219.

Space-Time Characterization for Resource Management

1792), pc208-2219.

Space-Time Characterization for Resource Management on Construction Sites, Iris D. Tommelein, Juan G. Castillo and Pierrette P. Zouein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p623-650.

1992), pol.2-630.
Use of GIS for Resource Management in Hong Kong, Jan R. Selwood and Peter G. D. Whiteside, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p942-949.

Resources
Conflicts in Health and Safety Matters: Between a Rock and a Hard Place, Richard C. Schwing, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p135-147.

Engineering, Construction, and Operations in Space III, 2 vols., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, 0-87262-868-X, 2513pp.

Response spectra

Evaluation of Seismic Vulnerability of Highway Bridges in the Eastern United States, J. B. Mander, F. D. Panthaki and M. T. Chaudhary, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86.

Experimental Study of Secondary Systems in Base-Isolated Structure, G. Juhn, G. D. Manolis, M. C. Constantinou and A. M. Reinhorn, ST Aug. 92, p2204-2221.

Prequency Based Control of Urban Blasting, Charles H. Dowding, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p181-211.

Seismic Rehabilitation of Seattle's Pier 69, David Pierce and Ronald E. Martinson, (Ports '92, David Torseth, ed., 1992), p418-428.

Seismic Response of Pacific Park Plaza. I: Data and Pre-liminary Analysis, M. Celebi and E. Şafak, ST June 92, p1547-1565.

Selection of Ground Motions for the Seismic Evaluation of Embankments, Robert K. Green, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p593-607.

Response time LGG System for Emergency Response Applications, An-thony A. Saka, SU Aug. 92, p90-98.

Instrumentation for a Full-scale Pavement Test in the Danish Road Testing Machine, Jørgen Krarup, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

Response Variability and Reliability of Plates Using the Weighted Integral Method, Friedrich J. Wall and George Deodatis, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p41-44.

Stochastic Finite Elements and Reliability Analysis, Lu-cia Faravelli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p45-48.

ps;3-48. Variability Response Functions and Stochastic Field Dis-cretization in Stochastic Finite Element Methods, Tsuyoshi Takada, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p116-119.

Responsibilities COER Wants You, CE May \$2, p78,80. Engineering Pre-engineered Buildings, Alexander New-man, CE Sept. 92, p58-61.

man, CE Sept. 92, p58-61.

Responsibility
ASCE Quality Manual Undermined, Lawsuit Says, CE
June 92, p16,18.

Buyer Beware: Pinning Liability on Vendors is Virtually
Impossible for Now, CC Oct. 92, p4-5.
Debris Torrents and Professional Responsibilities, S. O.
Russell, El Jan. 90, p49-55.

Ethical, Legal and Professional Responsibilities of Engineers to Owners and Contractors, Lawrence I. Erdos,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p989-1002.

Is Advanced Technology "The Gateway to Irresponsibility?", Jon E. Zufelt, El Oct. 89, p434-437.

Public-Safety Issues in Collapse of L'Ambiance Plaza,
Frank J. Heger, CF May 91, p92-112.

Responsibility is the Key (Itr), John K. Bright, CE Aug.
92, p29-30.

Application of Neural Network to Groundwater Remediation, J. H. Garrett, Jr., S. Ranjithan and J. W. Ebear, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p259-267.

sentation, Robert H. Allen, ed., 1992), p259-267.
Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McGormick, Mary C. Landin, Robert A. Evans and Robert Blama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-355.
The Challenge of Kissimmee River Restoration, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p596-701.
Creating Wetlands, Laurence J. Purcell and Thomas D. Johnson, CE Aug, 92, p36-37.
Engineering Aspects of Wetland Design, Donald F. Hayes and Michael R. Palermo, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p344-349.
Hydrologic Assessment for Riparian Restoration Proi-

Hydrologic Assessment for Riparian Restoration Projects, Douglas Hamilton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p624-629.

1792), po24-029.
Identifying the Critical Path and Building Coalitions for Restoring Degraded Areas of the Great Lakes, J. H. Hartig, D. P. Dodge, L. Lovett-Doust and K. Fuller, (Water Resource-Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p823-830.

An Overview: Wetland Restoration, Protection, and Establishment by Beneficially Using Dredged Material, Mary C. Landin, Thomas R. Patin and Hollis H. Allen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl 14-118.

mad Karamouz, ed., 1992), p114-118.
Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silverston and Mark Easley, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361.
Standard Methodologies for the Forensic Investigation of Pavements, James O'Kon, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p31-38.
Ten Tons of Lead to Recreate Monticello, CE Apr. 92, p10.

p10.

p10. Wetland Restoration and Creation Guidelines for Mitigation, Mary C. Landin, E. A. Dardeau, Jr. and Jerry L. Miller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p439-444.

Retaining walls

Active Earth Pressure on Walls With Base Projection, Amjad F. Barghouthi, GT Oct. 90, p1570-1575.

Balanced Seismic Design of Anchored Retaining Walls, G. Neelakantan, M. Budhu and R. Richards, Jr., GT June 92, p873-888.

June 92, p873-888.
The Behavior of Reinforced Soil Walls Constructed by Different Techniques, A. McGown, K. H. Loke and R. T. Murray, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1237-1248.
Centrifuge Models of Clay-Lime Reinforced Soil Walls, Erol Giller and Deborah J. Goodings, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1249-

1260.

Design Method for Frozen-Soil Retaining Wall, Sweanum Soo and B. B. Muvdi, CR June 92, p73-89. Design of Tied-Back Walls for Seismic Loading, Thomas J. Siller and Matthew O. Dolly, GT Nov. 92, p1804-1821.

Dynamic Response Analysis of Reinforced-Soil Retaining Wall, Muthucumarasamy Yogendrakumar, Richard J. Bathurst and W. D. Liam Finn, GT Aug. 92, p1158-

1167.

Effect of Footing Shape on Behavior of Cantilever Retaining Wall, John S. Horvath, GT June 91, p973-978.

Finite Element Analysis of a Geogrid Reinforced Soil Wall, Richard J. Bathurs, Rajagopal Karpurapu and Peter M. Jarrett, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1213-1224.

Geosynthetic Reinforced Soil Structures, Dov Leshchinsky and Ralph H. Boedeker, GT Oct. 89, p1459-1478.

Incorporating Corrosion in Reliability-Based Design of Anchored Bulkheads, M. J. S. Roth, T. C. Sandford and H. J. Dagher, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p160-163.

Jet Grouting for a Self-standing Wall, Gohichi Miyasaka, Yutaka Sasaki, Toshiaki Nagata, Mitsuhiro Shibazak, Masahiro Iji and Masami Yoda, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p144-

Laboratory Model Study on Geosynthetic Reinforced Soil Retaining Walls, I. Juran and B. Christopher, GT July 89, p905-926.

Limited Compaction Grouting for Retaining Wall Repairs, Michael J. Byle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p.288-300. Retaining Wall to Keep Rock Out of School, CE Nov. 92,

Retaining Wall With Reinforced Cohesionless Backfill, Swami Saran, K. G. Garg and R. K. Bhandar, GT Dec. 92, p1869-1888.

Seismic Passive Resistance of Tied-Back Walls, R. Richards, Jr. and D. G. Elms, GT July 92, p996-1011.
Seismic Response of Multianchored Retaining Walls, Thomas J. Siller and Dorothy D. Frawley, GT Nov. 92, p1787-1803.

Simple Rigid Plastic Model for Seismic Tilting of Rigid Walls, Raj Siddharthan, Samia Ara and Gary M. Nor-ris, ST Feb. 92, p469-487.

Ils, S1 FED, 74, PROTAGE.
Slope Stabilization Using In-Situ Earth Reinforcements, Seth L. Pearlman, Bradley D. Campbell and James L. Withiam, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1333-1348.

Timber Crib-Faced Soil-Nailed Retaining Wall, James G. Collin, Mohammed A. Gabr and Alan G. MacKinnon, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1457-1463.

Total Stress Analysis of Cantilever Sheetpiling in Layered Clay, Jay S. DeNatale and German A. Ibarra-Encinas, GT July 92, p1064-1082.

Two Full Size Structures Reinforced by Geotextiles, Ph. Delmas, Ph. Gotteland, J. P. Gourc and S. Haidar, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p.1201-1212.

Engineering Women Into the Workplace, Patti Hinckley, CE Nov. 91, p66-67.

Future Resources for Engineering, Peggy A. Johnson D. Leasure and Estela S. Llinas, El Jan. 92, p30-37.

Method to Inhibit Technetium Migration in a Geologic Repository, VirLynda Statler and William H. Ellis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1985-1990.

Retention Parameter Estimates for Curve Number Run-off Procedure, W. Carlisle Mills, Adrian W. Thomas, Anthony L. Dillard and Willard M. Snyder, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p372-377.

Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed. Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p791-802.

Strategies to Stem Declining Engineering Enrollments, Jack D. Bakos, Jr., El July 92, p250-257.

Technical Personnel Shortages in Construction Industry, Russel C. Jones, El Jan. 90, p16-26.

Women in Civil Engineering—Graduate's Perspective, Jack D. Bakos, Jr., El Jan. 92, p16-29.

## Retention basins

Earthflow Evaluation and Control: A Case History, Mi-chael R. Thomas and Alan L. Kropp, (Stability and Per-formance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864.

Design of Pena Colorada Tailings Retention Dam, Don-ald L. Sexton, James W. Carpenter and Ernest K. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374 388

Mechanism of Biological Treatment in Plug-Flow or Batch Systems, Hasan Ali San, EE July/Aug. 92, p614-

Model for Biological Reactors Having Suspended and At-tached Growths, Chi-Yuan Lee, EE Nov./Dec. 92, p982-987.

# Retrofitting

Caltrans to Retrofit Double-Deck Bridges, CE Jan. 92,

Earthquake Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Ger-ald M. Serventi and Larry L. Scheibel, (*Ports '92*, David Torseth, ed., 1992), p429-442.

Fuzzy Measures in the Knowledge Based Diagnosis of Seismic Vulnerability of Masonry Buildings, Alberto Bernardini, Roberto Gori and Claudio Modena, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28.

Lessons Not Learned from 1989 Loma Prieta Earth-quake, Ghassan Tarakji, El Apr. 92, p132-138.

Retrofitting a Landmark, David L. Houghton, CE Feb. 92, p55-57.

Retrofitting Storm Water Facilities for Quantity and Quality Control, Stuart G. Walesh, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p786-791.

Seismic Rehabilitation of Seattle's Pier 69, David Pierce and Ronald E. Martinson, (Ports '92, David Torseth, ed., 1992), p418-428.

Span Swap a Success, CE Nov. 92, p13.

Return flow

Return Flows in Large Rivers Associated with Navigation Traffic, Nani G. Bhowmik, B. S. Mazumder and Ta Wei Soong, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p760-765.

A Forecasting Model of Gaming Revenues in Clark County, Nevada, B. Edwards, A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Traffic Impact Fees in Schaumburg, Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p170-174.

Reverse osmosis
Brackish Groundwater Desalting in Southern California.
A Summary of Case Studies, Lee A. Jacobi, Julius Y.
Ma and William R. Everest, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p587-592.

Reversing flow

Reversing flow
Pulmonary Artery Velocity Profiles in Young Lambs, Belinda Ha, Hiroshi Katayama, Robert Krzeski, Carol L.
Lucas, G. William Henry, Patricia Lynch, Aji P. Yoganathan, Jose I. Ferreiro and Benson R. Wilcox, Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p836-839

The 1984 Major Rehab of the Muskegon Harbor, MI South Breakwater: An Extreme Example of Misguided Design of a Stone Structure, Charles N. Johnson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p238-253.

Articulating Block Mat Revetment for Whaler's Village, Robert A. Nathan and David G. Cannon, (Coastal En-gineering Practice '92, Steven A. Hughes, ed., 1992), p268-284

Coastal Engineering Design Codes in the Netherlands, Ammo Hoekstra and Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1037-1054.

p103/-1034.

Coastal Processes and Engineering on a Micronesian Fringing Reef, Stanley J. Boc, Jr., William J. Reynold and Jasmina M. Dobinchick, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p285-302.

Design and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p534-570.

Dutch Experience on Design of Dikes and Revetments,

ed., 1992), p554-570.

Dutch Experience on Design of Dikes and Revetments, Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p794-813.

An Example of Rubble Mound Construction Procedures, A. W. Sam Smith and L. Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p138-150.

Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 39-

South Jetty Scour Hole Stabilization, Ocean City, Maryland, Gregory P. Bass and Edward T. Fulford, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p583-597.

Reviewing

ASCE Review and Publication Process for Technical Journals, Otto J. Helweg and William W-G. Ych, (Irri-gation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p3-7.

How to Improve Writing Skills, Otto J. Helweg, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p13-18.

Use of a Geographic Information System for the Highway Design Review Process, Hosin Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p153-160.

What Makes a Quality Paper? James A. Liggett, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p8-12.

Reviews ADICPR Version 1.40, Bernard Golding, CC Jan. 92,

p1,4-6.

The Affordable Space Platform: The STS External Tank,
Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p945-956.

ASG COGO, Brian Brenner and Dennis Njuguna, CC
Mar. 92, p1,4-6.

Bargain Package for Smaller Structures Devid Application.

Bargain Package for Smaller Structures, David Angelotti, CC July 92, p1-9.

CC July 92, pr. 97.

CC July 92, pr. 97.

CC July 92, pr. 97.

The Past!, The Present!, The Future? Omar J. Lillevang. (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), pl. 11.

Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992), p548-562.

conomical LRFD Composite-Beam Design from HESCO, John Cook and Roger Blais, CC May 92, p1-

Guide for Evaluating Engineering Software: Organization Impact (Book Review), Philip Terry, CC Feb. 92, p2-

HEC-2 Shells and Tools, Cheryl Johnson, CC Apr. 92, p1,4-14.

Hydrology, Hydraulics and CAD, Peter J.R. Buttner, CC Dec. 92, p1,7-10.

In This Corner. AutoCad Release 12 vs. Microstation PC 4.0, Ranjit Sahai, CC Sept. 92, p1-8. Integrated Drainage Design, Bernard L. Golding, CC Dec. 92, p1-6.

92, p. 1-6. International Status of Dry Storage of Spent Fuels, K. J. Schneider, S. J. Mitchell and A. B. Johnson, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 159-1165.

The MIDUSS Touch, Ed Chamberland, CC June 92,

p1,10-14.

p1,10-14.

Prescriptive Model for Missouri River Reservoiroperation Analysis, David T. Ford, (Water Resources
Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad
Karamouz, ed., 1992), p555-560.

Realistic Specifications for Steel Bridge Painting, LuhMaan Chang and Machine Hsie, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p299-310.

A Review of Mathematical Models for Fine Sediment
Transport Processes, Y, Peter Sheag, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p381-385.

Site Mapping with 3DTM, Michael Lorczak, CC May 92,
p4-6.

Sizing Up Release 12, M. Kevin Parfitt, CC Aug. 92, p1,4-7.

p1,4-7.
The Status of Yucca Mountain Site Characterization Activities, Carl P. Gertz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p748-750.
Surveying Advantage, Robert S. Williams, CC Aug. 92, p1-3,14.
ThinET Walter Geograms CC Etc. 92, p1-3,14.

pl-3,14.

TDHNET, Walter Grayman, CC Feb. 92, pl.4-5.

The Theory of Elasticity: 1950-1992 and Beyond: Concluding Remarks, Lawrence E. Goodman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p637-639.

Users' Groups, Satinder P. S. Puri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1022-1030.

Versattic Data Managing, Amin Bahman, Co. 1992.

Versatile Data Managing, Amin Rahman, CC June 92,

Effects of Porous Bed on Turbulent Stream Flow above Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92, p1222-1240.

Physicochemical and Rheological Properties of Microwave Recyled Asphalt Binders, Laurand H. Lewandowski, Rogers Graham and Jim Shoenberger, Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p449-461.

Should the U.S. Accept the Concept of Navigable Depth? John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Teeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082.

Chemical Based Cement Grout System for Rock Grout-ing, A. V. Shroff and D. L. Shah, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p651-

Compaction Grout: Rheology vs. Effectiveness, James Warner, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.229-239.

Effects of Mixing on Rheological Properties of Microfine Cement Grout, Lois G. Schwarz and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p512-525.

Fundamental Observations on Cement Based Grouts (1): Traditional Materials, B. De Paoli, B. Bosco, R. Grana-ta and D. A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p474-485.

Fundamental Observations on Cement Based Grouts (2): Microfine Cements and The Cemill® Process, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p486-499.

Geometric Damage Tensor Based on Microplane Model, Ignacio Carol, Zdeněk P. Bažant and Pere C. Prat, EM Oct. 91, p2429-2448.

An Intrusive Fluid Mud Surveying System, Allen Teeter, Glynn Banks, Michael Alexander and Andrew Salkiel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017.

Random Vibration of the Viscoelastic Structure under Series of Stochastic Excitations, Pawel Sniady and Stan-islaw Zukowski, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992),

p152-155.

Recent Advances in Compaction Grouting Technology, James Warner, Norbert Schmidt, John Reed, Don Shepardson, Russ Lamb and Sam Wong, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), ed., Robe p252-264.

p. 23-204.

Rheological Properties of Microfine Cement Grouts with Additives, Ulf Håkansson, Lars Hässler and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p551-563.

Roll-Waves on a Non-Newtonian Mud Layer, Chiu-on Ng and Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p892-

Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.

Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.

Demand Management Strategies for Providence Water Supply Board, Arun K. Deb, Frank M. Grablutz and Paul Gadoury, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p169-

Rice Modeling Irrigation Schedules for Lowland Rice with Sto-chastic Rainfall, Affab H. Azhar, V. V. N. Murty and H. N. Phien, IR Jan./Feb. 92, p36-55.

Modeling Low-Flow Mixing through Pools and Riffles, Il Won Seo and W. Hall C. Maxwell, HY Oct. 92, p1406-

1423.
Rigid frames
Development of Design Spectra for Actively Controlled Wall-Frame Buildings, Y. P. Wang, A. M. Reinhorn and T. T. Soong, EM June 92, p1201-1220.
Functional Analysis in Continuum and Structural Mechanics, C. A. Nelson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p514-518.
Reliability Consideration in Shakedown Analysis, K. C. Chou and T. V. Galambos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p204-207.
Bield nexuments

ed., 1992), p204-207.

Rigid pavements

Analysis and Design of Doweled Slab-on-Grade Pavement Systems, Anastasios M. Ioannides and George T. Korovesis, TE Nov/Dec. 92, p745-768.

Dynamic Analysis of Rigid Airport Pavements with Discontinuities, Anant R. Kukreti, Mohammad R. Taheri and Ragnar H. Ledesma, TE May/June 92, p341-360.

Field Instrumentation and Performance Monitoring of Rigid Pavements, Raymond S. Rollings and David W. Pittman, TE May/June 92, p361-370.

Rigid-Pavement Evaluation Using NDT—Case Study, Jacob Uzan, TE July/Aug, 92, p527-539.

Rigid-body dynamics
Frictional Aspect of Rocking-Sliding of a Rigid Block
with Surface Impact, Majid Shekarian, Joel P. Comta
and Pol D. Spanos, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-

In-Plane Floor Deformations in RC Structures, Hassan S. Saffarini and Musa M. Oudaimat, ST Nov. 92, p3089-

3102. Nonlinear Impact and Chaotic Response of Slender Rocking Objects, Solomon C. S. Yim and Huan Lin, EM Sept 91, p2079-2100. Prediction of Geological and Mechanical Processes While Disposing of High-Level Waste (HLW) Into the Earth Crust, O. L. Kedrovsky and V. N. Morozov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992) n 739-762. dioactive Waste Management Program Committee, 1992), p759-762.

Rocking Impedance of Embedded Strip Foundations in Layered Soil, A. Bharadwaj and S. Ahmad, GT May 92, p796-813.

Stability of Systems of Rigid Bodies by Bounding Theorems, Thomas E. Boothby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p904-907.

Rigidity

Axisymmetric General Shells and Jointed Shells of Revolution, Pei Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

p3186-3202.

Buckling of Columns of Variable Flexural Rigidity, A. Signer, EM Mar. 92, p640-643.

Flexible Porous Breakwater, Keh-Han Wang and Xugui Ren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p224-227.

Frictionless Contact with BEM Using Quadratic Programming, Srdan Simunović and Sunil Saigal, EM Sept. 92, p1876-1891.

Simple Rigid Plastic Model for Seismic Tilting of Rigid Walls, Raj Siddharthan, Samia Ara and Gary M. Norris, ST Feb. 92, p469-487.

Rings
Buckle Propagation in Submarine Pipelines, G. D. Hahn,
M. She and J. F. Carney, III., EM Nov. 92, p2191-2206.
Low-Order Interpolation Functions for Curved Beams, S.
J. Pantazopoulou, EM Feb. 92, p329-336.
Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, Kuanchung J. Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p216-219.
Structural Efficiency of Internally Ring-Stiffened Steel
Tubular Joints, D. S. Ramachandra Murthy, A. G.
Madhava Rao, P. Gandhi and P. K. Pant, ST Nov. 92, p3016-3035.

Rinne, John E. John Rinne, Former President of ASCE, Dies at 83, NE Dec. 92, p15.

Comparison of ARS-Type Grade Control Model Testing and Prototype Response, C. Watson, N. Raphelt, P. Combs and S. Abt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p213-215.

218.
Dutch Experience on Design of Dikes and Revetments, Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p794-813.
Field Performance and Analysis of Steep Riprap, Guy Lefebvre, Karol Rohan, Mahrez Ben Belfadhel and Oscar Dascal, GT Sept. 92, p1431-1448.
Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p139-144.

144.
Flow Resistance of Riprap, Stephen T. Maynord, HY June 91, p687-696.
Hydrologic Assessment for Riparian Restoration Projects, Douglas Hamilton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p624-629.
Post Assessment to Public Memoria.

1992), p624-629.
Quartzite—A Hard Rock Approach to Rubble Mounds, Robert B. Wendorf, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p151-159.
Recent Criteria for Design of Groins, Cassie C. Klumpp and Drew C. Baird, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p828-833.

833.
Riprap Design in Marine Terminals, Sandra K. Martin and Stephen T. Maynord, (Ports '92, David Torseth, ed., 1992), p364-375.
Riprap Stability Under Impinging Flow, Jarres R. Leech, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p138.
Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-hsi Chu and Gilbert K. Nersesian, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.

Risk Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, J. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p236-259.
Moving Toward a Probability-Based Risk Analysis of the Benefits and Costs of Major Rehabilitation Projects, Daniel B. Taylor, Keith D. Hofseth, Leonard A. Shabman and David A. Moser, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p148-173. A. N 173.

Remediation Site Prioritization by the Risk Ranking and Filtering Method, James H. Lambert, Con Way Ling and Yacov Y. Haimes, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1929, p311-

Risk Based Optimal Fatigue Testing, J. D. Sørensen, M. H. Faber and I. B. Kroon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed.,

Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p523-526. Risk Based Structural Optimization, Palle Thort-Christensen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p535-538.

p535-538. Risk Consistent Estimate of Heat-Straightening Applications. I: Plates, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409. Risk Consistent Estimate of Heat-Straightening Applications. II: Beams, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426. Risk-Based Decision Making in Water Resources V, ISSN: 1063-5076, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, 0-87262-899-X, 395pp.

Sandbridge Virginia Oceanfront Seawall Arbitration
Hearing: Some Lessons Learned for Coastal Engineers,
David R. Basco, Robert A. Dolan and Carter Sinclair,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p1003-1020.
Session Summary—Risk and Reliability of Water Resources Infrastructure, Dan Taylor, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes,
ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed.,
1992), p350-354.
Session Summary—Risk Associated With Climate
Change, Ronald M. North, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David
A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p343345.
Unit Pricing and Unbalanced Bids, Normes A. Norther

Unit Pricing and Unbalanced Bids, Norman A. Nadel, CE June 91, p62-63.

CE June 91, 192-03.

Risk acceptance
An Innovative Institutional Arrangement Which Incorporates the Risk Preferences of Water Users, Norman J. Dudley, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p174-199.

Maximum and Minimum Storage Trajectories That Meet Specific Risk Levels, Laura Fagherazzi, Jean-Claude Rassam and André Turgeon, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p284-303. p284-303.

Reassessing the Risk Assessment, Wayne K. Tusa, CE Mar. 92, p46-48.

Mar. 92, p46-48.
Risk Assessment of Shipping Radioactive Waste Using the Standard Waste Box, O. S. Wang, R. F. Carlstrom, G. A. Coles and M. V. Shultz, (High Level Radioactive Waste Management Program Committee, 1992), p416-420.
Risk-Based Decision Making in Water Resources V, ISSN: 1063-5076, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, 0-87262-899-X, 395pp.

Risk allocation

RISK BIRCKEION Cost Effective Risk Allocation for Coastal Engineering Projects, Robert J. Smith, (Coastal Engineering Prac-tice '92, Steven A. Hughes, ed., 1992), p1021-1036.

Risk analysis

Acquisition of Expert Judgment: Examples from Risk As-sessment, Stephen C. Hora, EY Aug. 92, pl 36-148. Advancing Bridge-Pier Scour Engineering, Peggy A. John-son, El Jan. 91, p48-55.

son, El Jan. 91, p48-55.
Air Emissions Testing of Air Toxics at WWTPs, Michael
J. Barboza, Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p79-85.
An Assessment of Environmental Costs Associated with
Crude Oil Pipeline Damage Caused by Earthquakes,
Ronald T. Eguchi, Susan D. Pelmulder and Hope A.
Seligson, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992),
p153-167. p153-167.

p153-167.
City of San Diego—Study of Potable Reuse of Reclaimed Wastewater. Final Results, Ken Thompson, Adam W. Olivieri, Don Eisenberg, Robert C. Cooper, Richard E. Danielson and Lori Pettigrew, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138.
Climatic Change and Ensuing Risks Facing Water Resources Managers, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992), 52-266.

p52-66.

p32-00.

Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992, 0-87262-866-3, 1100pp.

Conflicts in Health and Safety Matters: Between a Rock and a Hard Place, Richard C. Schwing, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p135-147.

Pealing with Uncertaint Form Health Bick Assessment

khiv, ed., 1992), p135-147.
Dealing with Uncertainty: From Health-Risk Assessment to Environmental Decision Making, Anthony L. Cox, Jr. and Paolo F. Ricci, EY Aug. 92, p77-94.
The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, Pankaj A. Arora and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p451-456.

Earthquake-Induced Permanent Deformations: Probabi-listic Approach, M. K. Yegian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50. 

Waste Management Program Committee, 1992), p401-408.
Environmental Monitoring and Operator Guidance System (EMOGS) for Shallow Water Ports, Andrew L. Silver, (Ports '92, David Torseth, ed., 1992), p535-547.
An Event Size Probability Distribution for Risk Analysis, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p232-237.
Factoring in the Human Factor, CE Sept. 92, p11.
The General Theory of Quantitative Risk Assessment, Stan Kapian, (Risk-Based Decision Making in Water Resource V Yaov V. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p11-39.
Goochemical Evidence for Waning Magmatism and Polycyclic Volcanism at Crater Flat, Nevada, Frank V. Perry and Bruce M. Crowe, (High Level Radioactive Waste Management Program Committee, 1992), p2356-2365.
Geographic Information Systems in Earthquake Hazard Analyses, J. David Frost, Jean-Lou A. Chameau and Ronaldo Luna, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p452-459.
A GIS-Based Regional Risk Approach for Bridges Subjected to Earthquakes, Seong H. Kim, Michael P. Gaus, George Lee and K. C. Chang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p460-467.
High Level Radioactive Waste Management, 2 vols., High Level Radioactive Waste Management Program Committee, (James S. Tulenko, chmn.), 1992, 0-87262-891-4, 2492pp.
Bydraulic Risk of Flood Disaster Reduction at Dams, Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall

Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p549-

556.
Impact of Present Data Validation Practices on Risk Assessment of Hazardous Waste Sites, V. Balasundaram, C. Minch and N. Shashidhara, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p567-574.
Information Theory in Risk Analysis, James D. Englehardt and Jay R. Lund, EE Nov./Dec. 92, p890-904.
Integrated Assessment of Environmental Risk and Human Response, Mitchell J. Small, (Risk-Based Decision Making in Water Resources V, Vacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p78-91.
International Survey of Levee Freeboard Design Proce-

ed., David A., Moser, ed. and Eugene Z. Stakniv, ed., 1992), p78-91.

International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teresa Bowen MacArthur, (Hydrasilie Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p569-574.

Jury Verdict: Frequency versus Risk-Based Culvert Design, Gary L. Lewis, WR Mar/Apr. 92, p166-184.

Landslide Hazard Analysis for Pipeline Design, Northeast Utah, Jeffrey R. Keaton, Robert M. Robisson and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204.

The Lathrop Wells Volcanic Center: Status of Field and Geochronology Studies, B. Crowe, R. Morley, S. Wells, J. Geissman, E. McDonald, L. McFadden, F. Ferry, M. Murrell, J. Poths and S. Forman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013. Waste Mar p1997-2013

p1997-2013.

Longevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, Bruce D. Marsh and Ronald G. Resmini, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p202-2032.

Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, J. Stansbury, I. Bogardi and W. E. Kelly, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p236-259.

A Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, Michael F. Sheridan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2033-2038.

p2033-2038.

Natural Landslides, George F. Sowers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p804-839.

On Deciding Between the Use of Engineering Standards and Risk Analysis, George W. Annandale, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p219-225.

Probabilistic Environmental Risk of Hazardous Materials, Timothy L. Jacobs and P. Aarne Vesilind, Ef. Nov./Dec. 92, p878-889.

Quantitative Risk Assessment and Technology Transfer. Software Developments, Charles Yoe. (Risk-Based De-Software Developments, Charles Yoe. (Risk-Based De-Software)

Quantitative Risk Assessment and Technology Transfer: Software Developments, Charles Yoe, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p92-107.

Reassessing the Risk Assessment, Wayne K. Tusa, CE Mar. 92, p46-48.

Recurrence Interval of Geophysical Events, Hugo A. Loaiciga and Miguel A. Mariño, WR May/June 91, p367-382.

p367-382.

Recurrence Models of Volcanic Events: Applications to Volcanic Risk Assessment, Bruce M. Crowe, R. Picard, G. Valentine and F. V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2344-2355. Reliability-Based Pier Soour Engineering, Peggy A. Johnson, HY Oct. 92, p1344-1358.

Remediation Site Prioritization by the Risk Ranking and Filtering Method, James H. Lambert, Con Way Ling and Yacov Y. Haimes, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p311-321. 321.

321.

Responding to Public Opinion About Cumulative Long-Term Risks: Analysis and Communication of Risks from Climate Change and Hazardous Waste Sites, Robert E. O'Connor and Richard J. Bord, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p67-77.

Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p67-77.
Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.
Risk Assessment of Shipping Radioactive Waste Using the Standard Waste Box, O. S. Wang, R. F. Caristrom, G. A. Coles and M. V. Shultz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p416-420.
Risk Assessment or Engineering Standards: Toward a Decision Framework, Leonard Shabman, (Risk-Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, M. A. Cassaro, M. J. Cassaro, R. K. Ragade and S. Alexander, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p29-42.
Risk-Costs for Scour at Unknown Bridge Foundations, G. Kenneth Young, Stuart M. Stein and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111.
Risky Business: Can We Believe Port Risk Assessments? John R. Harrald, Thomas A. Mazzuchi and Christopher M. Stone, (Ports '92, David Torseth, ed., 1992), p657-669.
The Role of Risk Analysis in Feasibility Studies of Water

p657-669

p657-669.
The Role of Risk Analysis in Feasibility Studies of Water Resources Projects, Alvin S. Goodman, Lampros E. Bourodimos and Albert Machlin, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p322-330.
Safety Analysis for Waste Transports to the Planned Final Waste Repository KONRAD, F. Lange, D. Gründler and G. Schwarz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p421-426.
Scheduling Maintenance Dredging on Single Reach with Uncertainty, Jay R. Lund, WW Mar./Apr. 90, p211-231.

Screening Old Offshore Platforms: Previous Approaches and Further Thoughts, Peter W. Marshall, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed.

1992), p518-530.

neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p518-530.

Seismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, Klaus H. Jacob, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p58-71.

Session Report—Natural and Man-Made Hazards and Risk of Extreme Events, Jim Lambert, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p358-359.

Session Report—Risk Management Software, William Rowe, (Risk-Based Decision Making in Water Resource V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p346-347.

Session Summary—Behavioral, Social, and Institutional Aspects of Risk Analysis, Mitchell Small, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p355-357.

Session Summary—Plenary Session, Overview of Risk Assessment and Management, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p338-342.

Session Summary—Risk and Reliability of Water Resources Defrastructure. Dan Taylor, (Risk-Based Decision Infrastructure. Dan Taylor, (Risk-Based Decisoner)

KRIV, ed., 1992), p338-342.
Session Summary—Risk and Reliability of Water Resources Infrastructure, Dan Taylor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p350-354.
Session Summary—Risk Communication and Personation Part Communication and Personation Part Communication Par

1992), p.330-334.
ession Summary—Risk Communication and Perception, Robert O'Connor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p.348-

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546.

Risk management
Aversion to Epistemic Uncertainties in Rational Decision
Making: Effects on Engineering Risk Management, M.
Elisabeth Paté-Cornell and Paul S. Fischbeck, (RiskBased Decision Making in Water Resources V, Yacov
Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p200-218.
Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992), p1094-1099.
Minimizing the Risk and Impact of Tanker Accidents, C.
S. Birt and A. J. Jordan, (Ports '92, David Torseth, ed.,
1992), p670-681.
Nitrate Risk Management under Uncertainty, Vana 'BL

1992), p670-681.
Nitrate Risk Management under Uncertainty, Yong W. Lee, Mohamed F. Dahab and Istvan Bogardi, WR Mar/Apr. 92, p151-165.
Risk Analysis in Water Resources Engineering: Development and Application, Jacques G. Ganoulis, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p1-10.
Risk Based Decision Support Model for Water Delivery.

kniv, ed., 1992), pl-10.

Risk Based Decision Support Model for Water Delivery
Systems Subject to Natural Hazards, M. A. Cassaro, M.
J. Cassaro, R. K. Ragade and S. Alexander, Lifeline
Earthquake Engineering in the Central and Eastern
U.S., Donald B. Ballantyne, ed., 1992), p29-42.
Risk Reduction Through Indemnification Contract
Clauses, Peyton E. Hutchens, ME July 92, p267-277.
Standard of Care for Delivery of Engineered Products,
James C. Porter, El Apr. 90, p193-201.
Strategies in Risk Management of On Demand Guaran.

James C. Porter, El Apr. 90, p193-201. Strategies in Risk Management of On-Demand Guarantees, Robert L. K. Tiong, CO June 92, p229-243. System Engineering and Risk, Brian W. Mar, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p304-310.

Systematic Risk Management Approach for Construction Projects, Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-346.

Sept. 90, p. 533-540.
The Use of Influence Diagrams in Risk Management Involving Multiple Stakeholders, Y. Hong and G. E. Apostolakis, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p. 331-337.

## Risk taking

Aversion to Epistemic Uncertainties in Rational Decision Making: Effects on Engineering Risk Management, M. Elisabeth Paté-Cornell and Paul S. Fischbeck, Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p200-218.

Integrated Assessment of Environmental Risk and Human Response, Mitchell J. Small, (Risk-Based Deci-sion Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p78-91.

Surplus Promotes Price Competition, Tore O. Arnesen, CE Dec. 92, p6.

Environmental Amenities and the Location of Industrial Activity, Tim Allison and Frank Calzonetti, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p587-592.

The Impact of Risk Communications on Public Understanding: Combining a Survey with an Experiment, R. E. O'Connor and R. J. Bord, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p574-581.

Near-Field Radiation Doses from Transported Spent Nu-clear Fuel, R. F. Weiner and K. S. Neuhauser, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), pl 205-1208.

Nuclear Waste Repository Program Oversight: Strategies of the Situs Jurisdiction, Phillip A. Niedzielski-Eichner and Elgie Holstein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1927-1937.

Perceived Risk Impacts from Siting Hazardous Waste Facilities, R. C. Hemphill, B. K. Edwards and G. W. Bassett, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p582-586.

Performance-Assessment Comparisons for a Repository Containing LWR Spent Fuel or Partitioned Transmuted Nuclear Waste, R. W. Barnard and W. W.-L. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1397-1403.

Releases From Exotic Waste Packages from Partitioning and Transmutation, William W.-L. Lee and Jor-Shan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1387-1396.

Conjunctive-Use Planning in Mad River Basin, California, Joy Matsukawa, Brad A. Finney and Robert Willis, WR Mar./Apr. 92, p115-132.

Conjunctive-Use Planning in Mad River Basin, Califor-nia, Joy Matsukawa, Brad A. Finney and Robert Willis, WR Mar./Apr. 92, p115-132.

Development of Storage Demand Relation for Reservoirs—A Probabilistic Approach, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, p.549-554.

mad Karamouz, ed., 1972, p.59-5-53-8.
Reservoir System Reliability Constrained by Natural Salt Pollution, Ralph A. Wurbs and Awes S. Karama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p661-666.

Reuse Simulation in Irrigated River Basin, L. K. Smede-ma, W. Wolters and P. J. Hoogenboom, IR Nov/Dec.

92, p841-851.

Stochastic Simulation of Climate Input for Water Supply Forecasting, Roy W. Koch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p557-562.

System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Raiph A. Wurbs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992, p.498–503.

Water Availability and Water Demand Study for the Ci-tanduy River Basin, West and Central Java, Indonesia, R. Joseph Bergquist and Ed A. Toms, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamour, ed., 1992), p328-331.

Bed-Load Coefficients, Raul Pacheco-Cebalios, HY Oct. 92, p1436-1442.

BRSC—A Spreadsheet Program for Bridge Scour Sensi-tivity Analysis, Oner Yucel, (Hydraulic Engineering Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906-911.

Case Study of an Offshore Horizontal Boring, John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p697-712.

David T. Williams, Samuel Carreon, Jr. and Jeffrey B. Bradley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694.

Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.

One-Dimensional River Flow Simulation with Particular Consideration of Ecology and Environment, E. Ritterbach, M. Schröder and G. Rouvé, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1142-1147.

Stage-Discharge Relationship in Tidal Rivers, N. El-Jabi, G. Wakim and S. Sarraf, WW Mar./Apr. 92, p166-174.

Characteristics of Waves and Drawdown Generated by Barge Traffic on the Upper Mississippi River System, Ta Wei Soong and Nani G. Bhowmik, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p672-676.

Computer-Aided Support for Water Quality Modeling of the Russian River, John F. DeGeorge and Gerald T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p182-187.

Rivers

3H and 14C as Tracers of Ground-Water Recharge, John
A. Izbicki, Robert L. Michel and Peter Martin, (Irrigation and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p122-127.

Application of a Boundary Fitted Coordinate Mass
Transport Model, Daniel L. Mendelsohn and J. Crais
gwanson, (Estuarine and Coastal Modeling, Malcolm
L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg,
ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),
e382-404.

Are High and Low Flow Habitat Values Really the Same? Terry Waddle, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p374-379.

The Challenge of Kissimmee River Restoration, Stuart J. Appelbaum, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p696-701.

Computer Simulation of River Channel Changes at a Bridge Crossing on a Point Bar, Howard H. Chang, Marshall E. Jennings and Steve Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p76-81.

Evaluation of Palmiter Erosion Remediation Techniques—A Case Study, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p660-665.

Hydraulics of Dams from a Military Perspective, Ralph A. Wurbs, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p701-706. Innovative Intake Design for Raritan River, Paul Y. Chung, William S. Howard and Robert Ettema, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p220-225.

Loop Rating Curves from Goodwin Creek, Roger A. Kuhnle and Andrew J. Bowie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed.,

Maissaul Jennings, ed. and vani O. Brownis, ed., 1992), p74-1746. Menu of Coupled Velocity and Sediment-Discharge Rela-tions for Rivers, M. Fazle Karim and John F. Kennedy, HY Aug. 90, p978-996.

HY Aug. 30, py 16-790.

Modified QUAL2E Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, Rex A. Tolman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p 194-199.

Mohammad Karamouz, ed., 1992), p194-199.
Pollutant Transport Modelling in Large River Plumes, J. A. Stronach, C. R. Murthy and T. S. Murty, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajhh Cheng, ed. and Craig Swanson, ed., 1992), p759-770.
Properties of Various Sediment Sampling Procedures, Panayiotis Diplas and Jon B. Fripp, HY July 92, p955-970.

Proposed Similarity Law for Surface Velocity in Hydrau-lic Models, Dajin Yu and Weijun Zhao, HY Sept. 92, p1318-1325.

Recent Criteria for Design of Groins, Cassie C. Klumpp and Drew C. Baird, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p828-

Regional Flood Frequency Analysis Using Maps, A. I. McKerchar and C. P. Pearson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

1992), p19-24.

Remote Sensing Zeros in on River Spill, CE Aug. 92, p20. Remote Sensing Zeros in on River Spill, CE Aug. 92, p20.
Retum Flows in Large Rivers Associated with Navigation
Traffic, Nani G. Bhowmik, B. S. Mazumder and Ta
Wei Soong, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p760-765.
Salinity of Rivers: Transfer Function-Noise Approach,
Dolores Quifez, Ramón Aragüés and Kenneth K. Tanji,
IR May/June 92, p343-359.
Seour Downstream of Grade-Control Structures. Noel E.

Scour Downstream of Grade-Control Structures, Noel E.
Bormann and Pierre Y. Julien, HY May 91, p579-594.

Sediment and Aquatic Habitat in River Systems, ASCE Task Committee on Sediment Transport and Aquatic Habitats, Sedimentation Committee, HY May 92, p669-687.

Sediment Management with Submerged Vanes. II: Applications, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

Sediment Rating Curves Based on Ranked Values, Wolfgang Summer and Jean-Pierre Villeneuve, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p683-688.

Stage-Discharge Relationship in Tidal Rivers, N. El-Jabi, G. Wakim and S. Sarraf, WW Mar./Apr. 92, p166-174. Stochastic Theory for Irregular Stream Modeling, Part I: Flow Resistance, Shu-Guang Li, Lakshmi Venkataraman and Dennis McLaughlin, HY Aug. 92, p1079-

1090.

Surface Sampling of Dry and Underwater Sediment De-posits, Jon Fripp and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

Bnowmik, ed., 1992), p633-638.
Turbulence Characteristics of Sediment-Laden Flows in Open Channels, D. A. Lyn, Hy July 92, p971-988.
Usefulness of Low-Cost Watershed Monitoring: A Case Study, James G. Turek and David W. Blaha, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p712-717.

Water Data of the International Boundary and Water Commission, Conrad G. Keyes, Jr. and Kenneth N. Rakestraw, (Irigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p584-589.

WSPRO Files for Slope-Area Computations, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334.

Fatigue Strength of Riveted Bridge Members, John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90,

Road conditions Bad Roads? Try Bogotá (ltr), Jose G. Monge, CE July 92,

M. R. Wigan, TE Jan./Feb. 92, p62-83.

Road construction
Building Lunar Roads—An Overview, Bennett Rutledge,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p408-415.
Engineering Properties and Potential Uses of By-Product
Phosphygypsum, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p250-263.
Improving Steep Bends as Hairpin Curves on Mountainous Roads, B. K. Roy, TE Sept./Oct. 90, p667-682.
Method for Preevaluation and Selection of Road Projects
in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-

in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-

178.

Some Waste Materials in Road Construction, Salem D. Ramaswamy and Mohammed A. Aziz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p153-165.

The Use of Flue Case Desulfurization Gypsum in Civil

1992), p133-163.
The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.
Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Exact Minimum Sight Distance on Sag Curve with Cen-tered Overpass, Said M. Easa, TE July/Aug. 92, p588-

Improving Steep Bends as Hairpin Curves on Mountain-ous Roads, B. K. Roy, TE Sept./Oct. 90, p667-682.

Road damage Chrysler Takes the Bad Road to Make Better Cars, CE Feb. 92, p22.

nage-Processing Techniques Applied to Road Problems, M. R. Wigan, TE Jan./Feb. 92, p62-83.

Road design Chrysler Takes the Bad Road to Make Better Cars, CE Feb. 92, p22.

Geometric Characterization of Road Humps for Speed-Control Design, T. F. Fwa and L. S. Tan, TE July/Aug. 92, p593-598.

Start-Ups, CE Nov. 92, p10.

Road surface roughness
Building Lunar Roads—An Overview, Bennett Rutledge,
(Engineering, Construction, and Operations in Space
111, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p408-415.
Zable-Stayed Bridge Vibration Due to Road Surface
Roughness, Ton-Lo Wang and Dongzhou Huang, ST
May 92, p1354-1374.
Diamond Blades Easet the Road-Repair Grind, CE July
97, p44

Dynamic Response of Multigirder Bridges, Ton-Lo Wang, Dongzhou Huang and Mohsen Shahawy, ST Aug. 92, p2222-2238.

Aug. 92, p2222-2238.
Impact Analysis of Continuous Multigirder Bridges due to Moving Vehicles, Dongzhou Huang, Ton-Lo Wang and Mohsen Shahawy, ST Dee. 92, p3427-3443.
Predicting Vertical Acceleration in Vehicles Through Road Roughness, Jorge A. Marcondes, Mark B. Snyder and S. Paul Singh, TE Jan-/Feb. 92, p33-49.

Roadbeds

Environmental Monitoring Plan for a Pilot Study Using Phosphogypsum as a Roadbed Material, Reid Lea, Adam Faschan and Marty Tittlebaum, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p128-139.

Analytical Hydraulic Modeling of Road Culverts, Rohin S. Saleh and Ralph Hwang, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p798-803

Controlled Braking on Uneven Roads, Dieter Ammon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p65-68. The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79. Dusty Roads? Just Beet lt, CE Nov. 92, p10.

Estimating Earthwork Volumes of Curved Roadways: Mathematical Model, Said M. Easa, TE Nov/Dec. 92, p834-849.

Geometric Characterization of Road Humps for Speed-Control Design, T. F. Fwa and L. S. Tan, TE July/Aug. 92, p593-598.

nage-Processing Techniques Applied to Road Problems, M. R. Wigan, TE Jan./Feb. 92, p62-83.

Limited Compaction Grouting for Retaining Wall Repairs, Michael J. Byle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p288-300.

Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflectograph, Wim Th. Hoyinck and Joop van Zwieten, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p63-77.

Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

Roadmaps: An Effective Issue-Based Planning Process, Cyril W. Draffin, Jr. and A. Nick Suttora, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1567-1571.

Terminal Asphalt Patching: An Innovative Approach, C. Davis Rudolf, III. and George Degaraff, (Ports '92, David Torseth, ed., 1992), p836-848.

**Pobotics** 

Automation of Concrete Slab-on-Grade Construction, Osama Moselhi, Paul Fazio and Stanley Hason, CO Dec. 92, p731-748.

Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p308-

Computer-Controlled Brick Masonry, Leonhard E. Ber-nold, Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-160.

Concept for a Lunar Array for Very Low Frequency Radio Astronomy, Kenneth A. Marsh, Michael J. Mahoney, Thomas B. H. Kuiper and Dayton L. Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1935-1940.

Miller, ed., 1924, p. 1935-1940.

Directions for Lunar Construction: A Derivation of Requirements from a Construction Scenario Analysis, William C. Dias, Subramani T. Venkstaraman, Randel A. Lindemann, Jacob R. Matijevic, Jeffrey H. Smith and Richard R. Levin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p. 357-367.

Engineering, Construction, and Operations in Space III, 2 vols., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, 0-87262-868-X, 2513pp.

Graphical Models for Simulation and Control of Robotic Systems for Waste Handling, William D. Drotning and Phil C. Bennett, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p974-979.

Human Exploration of Mars: The Role of a Mars Outpost Laboratory, Michael B. Duke, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p43-

Icon-Based Concept for Exploring Rover Autonomy, J. H. Allton and Damian Lyons, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2400-2411.

Modular Robot Testbed, Chris Grasso, Wayne Jermstad, Mike Mathews, Jane Pavlich and Jim Avery, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl443-1453.

Diect-Oriented Programming in Robotics Research for Excavation, Darcy M. Bullock and Irving J. Oppenheim, CP July 92, p370-385.

On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.

On-Orbit Robotics Assembly and Operations of a Nuclear Mars Transfer System, W. J. G. Brimley, H. Kleinberg and H. H. Woo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p143-1422.

Outpost Service and Construction Robot (OSCR), Steven Kent, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1454-1463.

Principles of Control for Robotic Excavation, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1401-1412.

Robotic Portraction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p143-143.

Robotic Platform May Change Crane Design, CE Oct. 92, p13-14.

p13-14.

Robotic Platform May Change Crane Design, CE Oct. 92, p13-14.
 Robotics for Radioactive Waste Management in AEA Technology Facilities, S. A. Legg. A. Staples and C. J. H. Watson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p980-984.
 Robotics in SEI Terrestrial Launch Site Operations, Brian S. Yamamoto, A. J. Mauceri and O. A. Chaikovsky, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1464-1474.
 Spaceborne Construction and Operations Planning: Decision Rules for Selecting EVA, Telerobot, and Combined Work-Systems, Jeffrey H. Smith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1988-1995.
 Spiral Mining for Lunar Volatiles, H. H. Schmitt, G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170.
 Supervision and Automatic Control of Robotic Systems in Nuclear Engineering and M. J. Benner and M.

Miller, ed., 1992), p1162-1170.

Supervision and Automatic Control of Robotic Systems in Nuclear Environments, J. Benner and K. Leinemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p966-973.

Telerobotic Field Geologist: Preliminary Results of a Feasibility Study, Robert E. Cole, Charlotte Albert-Thenet, G. Jeffrey Taylor, Paul Johnson, Forrest Buzan, Joy Ishigo and Curtis Ikehara, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1434-1442.

Two Examples of Position Estimation, Gary Shaffer and Ben Motazed, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

Waste Isolation Pilot Plant Robotic Investigation and Study, T. M. Schultheis and J. R. Walls, (High Level Radioactive Waste Management Program Committee, 1992), p960-965.

Rock bolts

Rock bolts

bloratory Testing of Mechanical Rock Bolts, Koon Meng Chua, Jerry Lovato and Roy Cook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Mock excussion
Mechanical Excavation of Roadways and Chambers in
Hard Rock, Neil J. Dahmen and John Turner, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1507-1515.

Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, Kalyan K. Bhattacharyya, Richard McDonald and Robert S. Saunders, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1902) p.1511-1526. 1992), p1521-1526.

Rock fills

Pile Lateral Load Test in the Port of Los Angeles, Mat-thew F. Hunter, Allen M. Yourman, Gerald M. Diaz and Hsueh-Hsin Chu, (Ports '92, David Torseth, ed., 1992), p322-335.

The Upstream Zone in Concrete-Face Rockfill Dams, James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992),

p470-493.

**Rock joints** Joint Network Modeling and Scale Effects in Rock, P. H. S. W. Kulatilake, Shuxin Wang and Hasan Ucpirti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p441-444.

Effect of Water on the Consolidation of Crushed Rock Sait, M. L. Wang, S. K. Miao, A. K. Maji and C. L. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p531-534.

Frictional Aspect of Rocking-Sliding of a Rigid Block with Surface Impact, Majid Shekarian, Joel P. Conte and Pol D. Spanos, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-

331.
The Implications of Episodic Nonequilibrium Fracture-Matrix Flow on Site Suitability and Total System Performance, John J. Nitao, Thomas A. Buscheck and Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p279-296.

Joint Network Modeling and Scale Effects in Rock, P. H. S. W. Kulatilake, Shuxin Wang and Hasan Ucpirti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p441-444.

Method for Estimating the In Situ Cohesion of Cemen-

Method for Estimating the In Situ Cohesion of Cemented Conglomerate, Edward A. Nowatzki and David Kidd, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p158-174.

Norway's Olympic Cavern, Rajinder Bhasin and Fredrik Leset, CE Dec. 92, p60-61.

Dotential Increases in Natural Radon Emissions Due to Heating of the Yucca Mountain Rock Mass, C. Pescatore and T. M. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1599-1606.

ment Program Committee, 1992), pl 1999-1800. Semi-Analytical Treatment of Fracture/Matrix Flow in a Dual-Porosity Simulator for Unsaturated Fractured Rock Masses, R. W. Zimmerman and G. S. Bodvarsson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p272-278.

Rock mechanics

Rock mechanics
Design Criteria for an Underground Lunar Mine, John A.
Siekmeier, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1183-1194.
Parallelisation of a Distinct Element Stress Analysis Program, Siong K. Tang, Gregory K. Egan and Michael A.
Coulthard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p770-777.

Rock properties

The 1984 Major Rehab of the Muskegon Harbor, MI
South Breakwater: An Extreme Example of Misguided
Design of a Stone Structure, Charles N. Johnson, (Durability of Stone for Rubble Mound Breakwaters, Orville
T. Magoon, ed. and William F. Baird, ed., 1992),
p238-253.

The Assessment of Armourstone for Shoreline Protection, R. Koopmans and R. B. Watts, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p82-94.

Laboratory Testing of Stone for Rubble Mound Break-waters: An Evaluation, David A. Lienhart, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p19-33.

Problems With Armor-Stone Quality on Lakes Michigan, Huron, and Erie, Richard J. Lutton and Ronald L. Erickson, (Durability of Stone for Rubble Mound B. Frakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p115-136.

Quarry Inspection: A Geological Perspective, Gary J. D'Urso, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992, p185-199.

Quartzite—A Hard Rock Approach to Rubble Mounds, Robert B. Wendorf, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and Wil-liam F. Baird, ed., 1992), p151-159.

Resonant Column Testing of Dynamic Rock Properties, D. V. Morris and J. G. Delphia, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1993).

1992), p527-530.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Grad-ings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p64-81.

Durability of Stone for Rubble Mound Breakwaters, Or-ville T. Magoon, ed. and William F. Baird, ed., 1992, 0-87262-863-9, 288pp.

An Example of Rubble Mound Construction Procedures, A. W. Sam Smith and L. Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p138-150

In-Service Durability Evaluation of Armourstone, John-Paul Latham, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p6-18.

Joint Network Modeling and Scale Effects in Rock, P. H. S. W. Kulatilake, Shuxin Wang and Hasan Ucpirti, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p441-444.

Problems With Armor-Stone Quality on Lakes Michigan, Huron, and Eric, Richard J. Lutton and Ronald L. Erickson, (Durability of Stone for Rubble Mound Break-waters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p115-136.

Quarry Inspection: A Geological Perspective, Gary J. D'Urso, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p185-199.

Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, Kevin R. Stank and James W. Knox, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p95-114.

U.S. Experience With Armor-Stone Quality and Performance, Richard J. Lutton, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p40-59.

The 1984 Major Rehab of the Muskegon Harbor, MI South Breakwater: An Extreme Example of Misguided Design of a Stone Structure, Charles N. Johnson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p238-253.

p238-253.
The Assessment of Armourstone for Shoreline Protection, R. Koopmans and R. B. Watts, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), P82-94.
Design Management and Stress Analysis of a Circular Rock Tunnel and Emplacement Holes for Storage of Spent Nuclear Fuel, Nadia Kandalaft-Ladkany and Richard V. Wyman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2260-2266.
Designing Reinforced Rock, John A. Bischoff, Stephen J. Designing Reinforced Rock, John A. Bischoff, Stephen J.

ment Program Committee, 1992), p2260-2266.

Designing Reinforced Rock, John A. Bischoff, Stephen J. Klein and Thomas A. Lang, CE Jan. 92, p64-67.

The Durability of Rubble Mound Armour in Service—A Case Study, Terry Pigott, Sam Smith and Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p254-267.

Durability of Stone for Rubble Mound Breakwaters, Or-ville T. Magoon, ed. and William F. Baird, ed., 1992, 0-87262-863-9, 288pp.

Field Performance and Analysis of Steep Riprap, Guy Lefebvre, Karol Rohan, Mahrez Ben Belfadhel and Oscar Dascal, GT Sept. 92, p1431-1448.

Improving Stone Placement Specifications, David D. Sanders, Churability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p58-63.

Physical Model Testing of Broken Armor Stone, Donald L. Ward, Churability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p34-39.

Quarry Inspection: A Geological Perspective, Gary J. D'Urso, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p185-199.

Quartzite—A Hard Rock Approach to Rubble Mounds, Robert B. Wendorf, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p151-159.

Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, Kevin R. Stank and James W. Knox, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p95-114.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Gradings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p95-114.

Rockfill dam construction

Rockfill dam construction
Compaction Quality Control in Granular Shell of Earth
Dam, Panaghiotis C. Kotzias and Aris C. Stamatopoulos, GT Aug. 92, p1247-1255.

Rockfill structures
Construction and Performance of Two Large Rockfill
Embankments, Gordon M. Matheson and William F.
Parent, GT Dec. 89, p1699-1716.

Alternate Conceptual Model of Ground Water Flow at Yucca Mountain, Linda L. Lehman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p310-320.

p310-320. Analysis of Laterally Loaded Shafts in Rock, John P. Carter and Fred H. Kulhawy, GT June 92, p839-855. The Assessment of Armourstone for Shoreline Protection, R. Koopmans and R. B. Watts, (Druzbility of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p82-94. Can the Kristallin-I Near-Field Model be Considered Robust? 1. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p170-1726.

1992), p1770-1776.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

Level Radioactive Waste Management Program Committee, 1992), p1026-1039.
Computerized Tomographic Analysis of Fluid Flow in Fractured Tuff, C. W. Felice, J. C. Sharer and E. P. Springer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p296-299.
Design of Socketed Drilled Shafts in Limestone, M. C. McVay, F. C. Townsend and R. C. Williams, GT Oct. 92, p1626-1637.
Designing Registoreed Rock Lohe A. Bischoff Science.

92, p1626-1637.
Designing Reinforced Rock, John A. Bischoff, Stephen J. Klein and Thomas A. Lang, CE Jan. 92, p64-67.
Deterministic and Probabilistic Performance Assessment Methods Applied to Radionuclide Migration Through Fractured Geologic Medium, A. B. Gureghian, Y.-T. Wu and B. Sagar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p985-993.
Discrete Fracture Simulations of the Hydrogeology at

Program Committee, 1992), p985-993.

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, John L. Smoot, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p345-351.

Durability of Armor Stone for Rubble Mound Structures, Orville T. Magoon and W. F. Baird, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p3-4.

Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992, 0-87262-863-9, 288pp.

Dynamics of Saturated Rocks. IV: Column and Borehole Problems, Irene Vgenopoulou and Dimitri E. Beskos, EM Sept. 92, p1795-1813.

Effect of Solid-Phase Selectivity on Sorption of Cobalt and Strontium by Zeolitized Tuff, M. Gopala Rao, P. C. Das, E. U. Honga and A. E. Helou, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1587-1592.

stimating Damage and its Influence on Fracture Tough-ness, J. F. Labuz, L. Biolzi and C. N. Chen, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p523-526. Estimating Dam ness, J. F. Lai

An Example of Rubble Mound Construction Procedures, A. W. Sam Smith and L. Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p138-150.

Field Measurements of Tracer Gas Transport Induced by Barometric Pumping, R. H. Nilson, W. B. McKinnis, P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee 1992) p.110-216. Committee, 1992), p710-716.

Committee, 1992), p710-716.
Field Research Program for Unsaturated Flow and Transport Experimentation, V. C. Tidwell, C. A. Rautman and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p704-709.
Geochemical Model for 14C Transport in Unsaturated Rock, Richard B. Codell and William M. Murphy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1959-1965.
Icon-Based Concest for Exploring Royer Autonomy, J. H.

Icon-Based Concept for Exploring Rover Autonomy, J. H. Allton and Damian Lyons, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2400-2411.

Impact of Fracture Coatings on the Transfer of Water Across Fracture Faces in Unsaturated Media, David P, Gallegos, Steven G. Thoma and Douglas M. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p738-745.

In-Service Durability Evaluation of Armourstone, John-Paul Latham, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p6-18.

Multiple Modes of Steady-State Slide-Rock Response, Harry W. Shenton, III. and Nicholas P. Jones, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p312-315.

Numerical Modeling of Flow and Transport Phenomena in a Fractured Rock and Its Calibration Process, A. Ko-bayashi, R. Yamashita and Y. Moro, (High Level Radi-oactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e605-703. p695-703.

poss-103.

A Numerical Study of Water Percolation through an Unsaturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, C. F. Tsang, J. Noorishad and F. V. Hale, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p304-309.

Prediction of Geological and Mechanical Processes While Disposing of High-Level Waste (HLW) Into the Earth Crust, O. L. Kedrovsky and V. N. Morozov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 276, 276, 1992), p759-762.

Pricing Armor Rock for Rubble Mound Breakwaters, R. A. Everist, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p160-169.

Problems With Armor-Stone Quality on Lakes Michigan, Huron, and Erie, Richard J. Lutton and Ronald L. Er-ickson, (Durability of Stone for Rubble Mound Break-waters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p115-136.

Producing Armourstone Within Aggregate Quarries, Huanjin Wang, John-Paul Latham and Alan B. Poole, (Durability of Stone for Rubble Mound Breakwaters, Or-ville T. Magoon, ed. and William F. Baird, ed., 1992), p200-210.

Quarry Techniques for Dimensional Breakwater Stone, Stephen N. Stehlik, R. D. Knisely and C. L. Kramer, (Durability of Stone for Rubble Mound Breakwaters, Or-ville T. Magoon, ed. and William F. Baird, ed., 1992), p170-184.

Radioclements and Their Occurrence with Secondary Minerals in Heated and Unheated Tuff at the Nevada Test Site, S. Flexser and H. A. Wollenberg, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), at 1501 1502.

pl 192-1326.

Recent Experience With Armor Stone Cracking in the Buffalo District, David W. Marcus, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p222-237.

Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, Kevin R. Stank and James W. Knox, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and Wil-liam F. Baird, ed., 1992), p95-114.

Site-Dependence of Spatial Coherency, Norman Abra-hamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p260-263.

Some Case Histories of Armor Stone Production, Mel Hill, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p212-221.

Stability of Rock Armour Under Random Wave Attack. Performance of Non-Standard Rock Shapes and Gradings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p64-81.

Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p1196-1199

pl190-1199.
Mater-Rock Interaction in New Zealand Hydrothermal Systems: Comparison of Some Simulated and Observed Geochemical Processes, William E. Glassley and Bruce W. Christenson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p352-356.

Wave Runup on Smooth and Rock Slopes of Coastal Structures, Jentsje W. van der Meer and Cor-Jan M. Stam, WW Sept./Oct. 92, p534-550.

Wetted-Region Structure in Horizontal Unsaturated Fractures: Water Entry Through the Surrounding Porous Matrix, R. J. Glass and D. L. Norton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p717-726.

Zunil I Landslide and Landslide Hazard, Gerald R. Thiers, Alan Benfer, Luis Merida and Richard Grass, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p205-221.

Restricting Rockfalls, Richard D. Andrew, CE Oct. 92,

Exact Solution for General Torsion Problems Using Boundary Singularities, Omri Rand, EM Oct. 92, p2141-2147.

Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchoro. O. Chaallal and B. Benmokrane, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p606-617.

Roller compacted concrete

Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p272-290.

Concepcion Dam Design & Construction Problems and Their Solutions, M. Giovagnoli, F. Ercoli and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), pl 98-

Concrete-Faced RCC Dams, Ronnie M. Lemons, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p308-322.

The Construction of New Victoria Dam, Australia, Robert J. Wark, Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p63-82.

Construction of Urugua-I RCC Dam, Juan Buchas and Fotio Buchas, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p258-271.

The Design and Construction of Shuikou Project RCC Diversion Wall, Ma Zhong Hang, Cai Heming and E. B. Kollgaard, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p117-131.

Design and Proposed Construction Techniques for Pangue Dam, Brian A. Forbes, Dario Croquevielle B. and Hernan Zabaleta G., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p47-62.

Design of Miel II—A High RCC Dam, Alberto Marulan-da, Fabio Amaya and Ernest Schrader, (Roller Com-pacted Concrete III, Kenneth D. Hansen, ed. and Fran-cis G. McLean, ed., 1992), p83-98.

Design of Pena Colorada Tailings Retention Dam, Don-ald L. Sexton, James W. Carpenter and Ernest K. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374-

Design of the Boney Falls RCC Emergency Spillway, W. J. Marold, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-

Economic Factors in Roller Compacted Concrete Dam Construction, John W. Parker, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p227-241.

Final Design and Construction of Gibraltar Dam Strengthening, Noel C. Wong, Theodore B. Feldsher, Robert S. Wright and David H. Johnson, (Roller Com-pacted Concrete III, Kenneth D. Hansen, ed. and Fran-cis G. McLean, ed., 1992), p440-458.

Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, K. H. Frizell, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439.

Lessons Learned from Elk Creek Dam, Dennis R. Hop-man, (Roller Compacted Concrete III, Kenneth D. Han-sen, ed. and Francis G. McLean, ed., 1992), p162-180.

Mixing and Delivery of Roller Compacted Concrete, Robert Oury and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p242-257.

Overtopping Protection Using Roller-Compacted Con-crete, Harry E. Jackson, (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1216-1221.

Performance of Upper Stillwater Dam, Alan T. Richard-son, (Roller Compacted Concrete III, Kenneth D. Han-sen, ed. and Francis G. McLean, ed., 1992), p148-161.

Permeability of Roller Compacted Concrete, Nemkumar Banthia, Michel Pigeon, Jaques Marchand and Jean Boisvert, MT Feb. 92, p27-40.

RCC at 10, John Prendergast, CE Oct. 92, p44-47. RCC Conference Traces Decade of Progress, CE Apr. 92,

p20-21.

RCC Dam Construction—A Contractor's View, Jeffrey C. Allen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-

RCC Dam Design Concepts Versus Construction Condi-tions for Stagecoach Dam, Terrence E. Arnold and Daniel L. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p291-307.

RCC for Rehabilitation of Dams in the USA-An Overview, Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean,

ed., 1992), p22-46.

RCC Mixes and Properties Using Poor Quality Materials-Concepcion Dam, L. Gackel and E. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, p358-373.

RCC Test Specimen Preparation—Developments Toward a Standard Method, Terrence E. Arnold, Theodore B. Feldsher and Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p341-357.
Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p3491-505.

p491-505.

A Review of Design Criteria for High RCC Dams, Mal-colm R. H. Dunstan, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p132-147.

Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p99-116.

Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992, 0-87262-862-0, 520pp.

Roller Compacted Concrete Mix Design, Stephen Tatro and James K. Hinds, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p323-340.

Roller Compacted Concrete Tailing Retention Dam, Daniel L. Johnson, Nigel A. Skermer and Frank Bergstrom, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p181-197.

Santa Cruz Dam Modification, Megan Metcalf, Timothy P. Dolen and Paul A. Hendricks, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p459-475.

Thermal Analysis for RCC—A Practical Approach, Stephen Tatro and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p389-406.

Thermal-Structural Analysis Methods for RCC Dams, P. R. Barrett, H. Foadian, R. J. James and Y. R. Rashid, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p407-422.

Utilization of Fly Ash in High Volumes for Low Strength Cement Composites, P. Balaguru, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p308-319.

Supermarket Roof Collapse in Burnaby, British Columbia, Canada, C. Peter Jones and N. D. Nathan, CF Aug. 90, p142-160.

# Roofing materials

Denver International Airport Fabric Roof Design, James H. Bradburn, Horst Berger and Lee Erdman. (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p192-198. Tapered Insulation Builds up Roof, CE May 92, p98.

## Roofs

Denver International Airport Fabric Roof Design, James H. Bradburn, Horst Berger and Lee Erdman, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p192-198.

Estimating Uplift Capacity of Light Steel Roof System, R. A. LaBoube, ST Mar. 92, p848-852.

Howe Truss Behavior Interpreted by Deflections, Zbig-niew Cywiński, Marek Jasina and Stefan Niewitecki, CF Aug. 92, p151-160.

Roof Management Alternatives for Aging Launch Infra-structure, Dennis Firman, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2056-2063.

Roof-Snow Load for Seismic-Design Calculations, Michael J. O'Rourke and Robert S. Speck, Jr., ST Sept. 92, p2338-2350.

Ten Tons of Lead to Recreate Monticello, CE Apr. 92,

Tensile Terminal, Horst Berger and Edward M. De Paola, CE Nov. 92, p40-43.

Uplift Capacity of Z-Purlins, Roger A. LaBoube, ST Apr. 91, p1159-1166.

Wind Loads on Buildings with Sawtooth Roofs, Patrick J. Saathoff and Theodore Stathopoulos, ST Feb. 92, p429-446.

Roofs, cable

Analysis of the Georgia Dome Cable Roof, Gerardo Castro and Matthys P. Levy, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p566-573.

Ropeway Material Handling Systems for Lunar Mining Sites, H. Peter Huttelmaier and Jonathan R. Carrick, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 116-1126.

Rotating biological contactor Activity of Biomass in RBC System Treating Pulp Indus-trial Wastewater, Boshou Pan and L. Hartmann, EE Sept./Oct. 92, p744-754.

Effect of Footing Shape on Behavior of Cantilever Re-taining Wall, John S. Horvath, GT June 91, p973-978.

Eigenproperties of a Twisted, Nonuniform Rotating Beam by the Finite Element Metbod, Alan G. Hernried and Wei-Ming Bian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p924-

921.
Blastic Stability of Heavy Rotating Columns, C. M. Wang, EM Jan. 90, p234-239.
Particle Motion in Rotary Screen, Richard Ian Stessel and S. C. Kranc, EM Mar. 92, p604-619.
Rational Approach for Modifying Rotational Water Delivery Schedule, Sanjay Bhirud, N. K. Tyagi and C. S. Jaiswal, IR Sept./Oct. 90, p632-644.

Reliability of Nonlinear Frame Structures by SFEM, Achintya Haldar and Yiguang Zhou, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p336-339.

Routes to Chaos of a Vertically Rotating Pendulum, S. Yip and F. DiMaggio, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p672-675.

Application of NMR to Rotating Granular Flow, M. Nak-agawa and E. K. Jeong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p644-647.

Flow Visualization of Lid-Driven Cylindrical Cavity Flow, You-Gon Kim and Ching-Ien Chen, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p393-396.

Linear Surface Waves Over Rotating Fluids, Ting-Kuei Tsay, WW Mar./Apr. 91, p156-171.

Shear Flow Between Walls in Relative Motion, H. J. Leu-theusser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p608-611.

Alluvial Canals Adequacy, Siddig E. Ahmed, IR July/ Aug. 92, p543-554.

Dimensionally Homogeneous Manning's Formula, Ben Chie Yen, HY Sept. 92, p1326-1332. Flow Resistance of Riprap, Stephen T. Maynord, HY June 91, p687-696.

A Fourier Series Solution to Bottom Roughness Induced Stresses During Pipe Laying, Naum Kershenbaum, J. T. Powers and Donald Chang. (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1006-1035.

Fracture Surface Characterization of Concrete, M. A. Issa, A. M. Hammad and A. Chudnovsky, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130.

Influence of Particle Structure on Properties of Fly Ash and Sand, Krzysztof Parylak, (Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl031-1041.

Menu of Coupled Velocity and Sediment-Discharge Rela-tions for Rivers, M. Fazle Karim and John F. Kennedy, HY Aug. 90, p978-996.

HI Aug. Ju, pri-8-76.
Numerical and Analytical Description of Highway Surface Roughness, Ton-Lo Wang, Mohsen Shahawy and Dongzhou Huang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p309-316.

Oil Under Ice: Buoyancy Viscous Spreading, Sujeeva A. Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Sobutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p102-107.

Predicting Vertical Acceleration in Vehicles Through Road Roughness, Jorge A. Marcondes, Mark B. Snyder and S. Paul Singh, TE Jan./Feb. 92, p33-49.

Roughness Measurements of Airfield Pavements, Elson B. Spangler, Anthony G. Gerardi and Hisao Tomita, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366.

Stochastic Theory for Irregular Stream Modeling. Part I: Flow Resistance, Shu-Guang Li, Lakshmi Venkatara-man and Dennis McLaughlin, HY Aug. 92, p1079-

Velocity Distribution Inside and Above Branched Flexi-ble Roughness, Omnia El-Hakim and Mohamed M. Sa-lama, IR Nov./Dec. 92, p914-927.

Roughness coefficient
Darcy-Weisbach Roughness Coefficients for Gravel and
Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz
and Gary A. Wieman, IR Jan./Feb. 92, p104-112.

and Gary A. wieman, it Jan/Feb. 26, p10-112.

Darcy-Weisbach Roughness Coefficients for Selected
Residue Materials, John E. Gilley, Eugene R. Kottwitz
and Gary A. Wieman, (Irrigation and Drainage: Saving
a Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p481-486.

Dracy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p747-752.

Flow Capacity through Wide and Submerged Vegetal Channels, M. W. Abdelsalam, A. F. Khattab, A. A. Khalifa and M. F. Bakry, IR Sept./Oct. 92, p724-732.

Furrow Flow Velocity Effect on Hydraulic Roughness, Thomas J. Trout, IR Nov./Dec. 92, p981-987.

Hydraulic Roughness Coefficients for Native Rangelands, Mark A. Weltz, Awadis B. Arslan and Leonard J. Lane, IR Sept./Oct. 92, p776-790.

Mesh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p323-328.

Prediction of Natural Channel Hydraulic Roughness, Sid-dig E. Ahmed and Mohammed B. Saad, IR July/Aug. 92, p632-639.

Route preferences

A Multi-objective Criteria Analysis for Alternative Route Planning, Amy Zlotsky, Michael P. Gutzmer and Guy M. Evasco, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p474-479.

Shortest Path Within Polygon and Best Path Around or through Barriers, Yihua Xiong and Jerry B. Schneider, UP June 92, p65-79.

Shortest Path Within Polygon and Best Path Around or through Barriers, Yihua Xiong and Jerry B. Schneider, UP June 92, p65-79.

Decision Support System for Multiobjective Service Route Design, Jin-Yuan Wang and Jeff R. Wright, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

GIS Analysis of Routes for Transportation of Hazardous Materials, Baxter E. Vieux and Madhusudan V. Kalyanapuram, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl68-173.

A Cushy Job for Landfill Liners, CE Dec. 92, p8

Energy Dissipation Characteristics of Rubber Cylinders, Dean L. Sicking, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p139-

Properties of Tire Chips for Lightweight Fill, Dana N. Humphrey and William P. Manion, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1344-

1355.
Scrap Tires Used in Rubber-Modified Asphalt Pavement
Engineering Applications, Michael and Civil Engineering Applications, Michael Blumenthal and Joseph L. Zelibor, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p182-192.

1992, p162-192.
Use of Rubber Tires in Highway Construction, Imitiaz Ahmed and C. W. Lovell, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p166-181.
Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Scrap Tires Used in Rubber-Modified Asphalt Pavement and Civil Engineering Applications, Michael Blumenthal and Joseph L Zeliptor, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p182-192.

1992, p182-192. Technologies for Utilization of Waste Tires in Asphalt Pavement, William E. Eleazer and Morton A. Barlaz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, p193-201. Technology Issues for Enhancing Waste Material Utilization in Highway Construction Addressed by the SHRP-IDEA Program, K. Thirumalai, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, p.1-8. 1992), p1-8.

1932, 1916.
1926 of Rubber Tires in Highway Construction, Imitiaz Ahmed and C. W. Lovell, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p166-181.

Rubble-mound breakwaters
Breakwater Breakthrough—Bold New Breakwaters, William F. Baird, Kevin Hall and Virginia Fairweather, CE Jan. 87, p45-48.
Concrete for Sealing Voids in Rubble Structures, D. P. Simpson, B. D. Neeley and D. M. Walley, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p847-861.
Durabilities.

Durability of Armor Stone for Rubble Mound Structures Orville T. Magoon and W. F. Baird, (Durability of Stone for Rubble Mound Brakwaters, Orville T Magoon, ed. and William F. Baird, ed., 1992), p3-4.

The Durability of Rubble Mound Armour in Service—A Case Study, Terry Piggott, Sam Smith and Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p254-267.

Durability of Stone for Rubble Mound Breakwaters, Or-ville T. Magoon, ed. and William F. Baird, ed., 1992, 0-87262-863-9, 288pp.

An Example of Rubble Mound Construction Procedures, A. W. Sam Smith and L. Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), pl 38-

Improving Stone Placement Specifications, David D. Sanders, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p58-63.

Laboratory Testing of Stone for Rubble Mound Break-waters: An Evaluation, David A. Lienhart, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p19-33.

Physical Model Testing of Broken Armor Stone, Donald L. Ward, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Beird, ed., 1992), p34-39.

Pricing Armor Rock for Rubble Mound Breakwaters, R. A. Everist, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p160-169.

Quartzite—A Hard Rock Approach to Rubble Mounds, Robert B. Wendorf, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and Wil-liam F. Baird, ed., 1992), p151-159.

Recent Experience With Armor Stone Cracking in the Buffalo District, David W. Marcus, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p222-237.

Some Case Histories of Armor Stone Production, Mel Hill, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p212-221.

Stability of Accropode(R) and Comparison with Paral.

1992), p212-221.
Stability of Accropode(R) and Comparison with Parallelepipedic Block, Braulio G. Madrigal and José Lozano, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p704-717.
Trends in Phreatic Surface Motion in Rubble-Mound Breakwaters, Kevin R. Hall, WW Mar/Apr. 91, p179-

U.S. Experience With Armor-Stone Quality and Performance, Richard J. Lutton, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p40-59.

Rule induction tools

Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992, 0-87262-892-2, 305pp.

305pp.

Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, Catherine D. Perman and Leonard Ortolano, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.

Rule-Based Representation, Ashim Bose and Robert H. Allen, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p43-59.

A Rule-Based System for Evaluating Final Covers for Hazardous Waste Landfills, Lewis A. Rossman and James T. Decker, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p161-175.

Simplified Methods for Assessment of the Structural In-

p101-175.
Simplified Methods for Assessment of the Structural Integrity of Existing Steel Jacket Platforms in the Gulf of Mexico, Rajiv K. Aggarwal, (Civil Engineering in the Geans V, Robert T. Hudspeth, ed., 1992), p750-769.
Site Event Advisor: Expert System for Contract Claims, James E. Diekmann and Knut Gjertsen, CP Oct. 92, p472-479.

Ranoff
The 1991 Revolution in Water Management, George R.
Baumli, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamoux, ed., 1992), p322-327.
Application of Monthly Model of Los Angeles Aqueduct
System to Investigate Impacts from Mono Lake Tributary Diversions, Russ T. Brown and William R.
Hutchison, (Hydraulat Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p10421048.
Applications of Remote Sensing to Hydrology. Sun F.

1048.
Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.
Assessing Uncertainty of Unit Hydrograph, Yeou-Koung Tung and Bing Zhao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p543-548.

548.
Beginning of Motion for Selected Unanchored Residue Materials, John E. Gilley and Eugene R. Kottwitz, IR July/Aug. 92, p619-630.
Calculation of Runoff from Rainfall Using "NURP" Data, Albert H. Halff, Henry M. Halff and Juan S. Rodriguez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p487-492.
Calibrating SHE Soil-Erosion Model for Different Land

1992), p487-492.

Caiibrating SHE Soil-Erosion Model for Different Land Covers, J. M. Wicks, J. C. Bathurst and C. W. Johnson, IR Sept./Oct. 92, p708-723.

Climate Change and Water Management Flexibility, Linda L. Nash, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-522.

Conceptual Basis of Seasonal Streamflow Time Series Models, Jose D. Salas and J. T. B. Obeysekera, HY Aug. 92, p1186-1194.

Darcy-Weisbach Roushness Coefficients for County-

Darcy-Weisbach Roughness Coefficients for Gravel and Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, IR Jan./Feb. 92, p104-112.

Darcy-Weisbach Roughness Coefficients for Selected Residue Materials, John E. Gilley, Eugene R. Kottwitz and Gary A. Wieman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p481-486. Effects of Drainage and Water-Management Practices on Hydrology, K. D. Konyha, R. W. Skaggs and J. W. Giliam, IR Sept./Oct. 92, p807-819. Estimating Peak Flows from Small Agricultural Watersheds, James V. Bonta and A. Ramachandra Rao, IR Jan./Feb. 92, p122-137.

Experiments with Wind Effects on Pavement Runoff, Joseph R. Reed, David F. Kibler and George Krallis, (Hydraulic Engineering: Suring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.

G. BROWMIK, ed., 1993, p931-933.
FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarreta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p940-945.

1992), p940-945.
Fractal Concept Used in Time-of-Concentration Estimates, Gert Aron, James E. Ball and Thomas A. Smith, IR Sept./Oct. 91, p635-641.
Hydrologic Methods for Mitigating and Remediating Wetlands in Industrial Development, W. J. Rabe, Jr. and J. K. Virmani, (Hydraulic Engineering: Saving a Threatened Resource--in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p488-403

Hydrologic Parameter Estimation Using Geographic Information System, Nageshwar R. Bhaskar, Wesley P. James and Ravikumar S. Devulapalli, WR Sept./Oct. 92, p492-512.

Improved Techniques in Regression-Based Streamflow Volume Forecasting, David C. Garen, WR Nov./Dec.

pos-46-70.
 pos-46-70.

SOMITONS, F. FISTEE LIBRASEVE, Ed., 1992), p486-491.
Modeling Nutrient Loadings from Croplands in the Chesapeake Bay Watershed, Anthony S. Donigian, Jr. and Avinash S. Patwardhan, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p817-82.

p817-822. New Look at Regional Flood-Frequency Relations for Arid Lands, Hjalmar W. Hjalmarson and Blakemore E. Thomas, HY June 92, p868-886. Non-Point Source Pollution Due to Runoff Over Sandy Soil, D. Payne, C. Richardson, A. D. Parr and K. Janish, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p439-444. Not Just Talking About the Weather, CE June 92, p11. Probabilistic Design of Oren Drainage Channels. Said M. Probabilistic Design of Oren Drainage Channels. Said M.

Not Just Talking About the Weather, CE June 92, p11.

Probabilistic Design of Open Drainage Channels, Said M.
Easa, IR Nov/Dec. 92, p868-881.

Progress Report ARS/CS Runoff Curve Number Work
Group, D. E. Woodward and W. J. Gburek, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p378-382.

Retention Parameter Estimates for Curve Number Runoff Procedure, W. Carlisle Mills, Adrian W. Thomas,
Anthony L. Dillard and Willard M. Snyder, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p372-377.

Simulation of Runoff and Infiltration of Disturbed Land,
Ben Chie Yen and Robert Riggins, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p401-406.

Soil Moisture and Runoff—Another Look, Joseph A. Van
Mullem, (Irrigation and Drainage: Saving a Threatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), p366-371.

Status of ASCE Handbook of Hydrology, Thomas P.

1992), p300-371.
Status of ASCE Handbook of Hydrology, Thomas P. Wootton, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p448-451.

Stepwise Disaggregation Scheme for Synthetic Hydrology, Emidio G. Santos and Jose D. Salas, HY May 92,

Variations in Curve Number for a Reclaimed AML Site, K. James Fornstrom and James L. Smith, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p389-394.

Water Quality Management Planning—Bird River Wa-tershed, Alan Cavacas, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p96-101.

### off coefficient

Regional Methods for Design Floods in Australia, David H. Pilgrim, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1-6.

Appropriate Technology for Flood Warnings, Mark E. Nelson, CE June 92, p64-66.

Case Study: Design of a Traditional Village Master Plan, Raul J. Cotilla, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p111-120.

Design and Maintenance of Rural Water Supply Systems for Improved Performance, Paul D. Robillard and Ronald L. Droste, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p523-528.

Ecuador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, Ricardo Javier Moreno, SU Nov. 92, p118-129.

Nov. 74, p110-127.

Rural-Urban Water Transfers in Nevada: Solution or Problem? John W. Fordham, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p492-497.

Solid Waste Management: The Extension Service Initiative, M. F. Dahab and W. E. Woldt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-548.

Cold Warrior to Construction Manager, CE Apr. 92, p10. Cooper Union Aids Ex-Soviet Engineers, CE Sept. 92, p15.

## Safety

Analysis of Stability of L'Ambiance Plaza Lift-Slab Tow-ers, Piotr D. Moncarz, Roy Hooley, John D. Osteraas and Brant J. Lahnert, CF Nov. 92, p232-245.

ASCE Should Have a Construction Safety Committee, C. E. Jackson, Jr., El Jan. 92, p56-59.

Bridge Overloading Criteria, Michel Ghosn, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p575-578.

Buckling of Suspended Cambered Girders, Walter L. Peart, Edward J. Rhomberg and Ray W. James, ST Peart, Edward J. Feb. 92, p505-528.

Can Design Professionals Be Made Responsible for Safe-ty?, CE Nov. 92, p38.

(y), C. Nov. y., p.88.
Conceptual Design of a Monitored Retrievable Storage Cask Employing Yucca Mountain Containers, C. Erwin, D. R. Jackson, J. R. Oliver, M. S. Aljohani and D. B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2235-2240.

Construction Loads on Floors: Results of a Survey, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p499-

302...
A Context for Understanding the Significance of Radiation Exposures from the MRS, Dan Kane, Ricardo Palabrica and Christine Van Lenten, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1938-1945.

Controlled Braking on Uneven Roads, Dieter Ammon, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p65-68.

Criticality Safety and Shielding Design Issues Related to Transport Cask Design, Alan H. Wells, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992). Waste Mar p2151-2155.

Criticality Safety of TRU Storage Arrays at the Waste Iso-lation Pilot Plant, William A. Boyd and Mark W. Fec-teau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2069-2077.

Design Cable-stayed Bridge for Cost Effectiveness and Salety, Jih-Jiang Chyu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992),

p59-62.

Design Criteria for Ferry Landings, Charles T. Jahren, Ralph Jones and Seiichiro Ishii, (*Ports '92*, David Tor-seth, ed., 1992), p493-505.

Setin, ed., 1974, psys-303.

Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, M. Peehs and K. Einfeld, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1181-1187

mittee, 1992), p1181-1187.
The Evaluation of Slope Stability—A 25 Year Perspective, Norbert R. Morgenstern, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1-26.
An Evaluation of the Proposed Tests with Radioactive Waste at WIPP, Lokesh Chaturvedi and Matthew Silva, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p600-609.
Evaluate Place Station Subsurface Reconstruction and

Exchange Place Station Subsurface Reconstruction and Improvements, William C. Kerr, George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178.

Expert System for Construction Safety. I: Fault-Tree Models, Fabian C. Hadipriono, CF Nov. 92, p246-260. Expert System for Construction Safety. II: Knowledge Base, Fabian C. Hadipriono, CF Nov. 92, p261-274.

Flood Control Experiences in China and 1991 Flood Dis-aster, Daniel J. Gunaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p965-970.

1992), p965-970.
FS=1.5: Is It Appropriate for Embankment Design? Scott A. Ashford, Lawrence H. Roth, Sandra L. Madsen and Donald G. Anderson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1112-1125.
Graphical Models for Simulation and Control of Robotic Systems for Waste Handling, William D. Drotning and Phil C. Bennett, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p974-979.
Human Error in Complex Systems, Douglas H. Harris.

Human Error in Complex Systems, Douglas H. Harris, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

mittee, 1992), p1527-1533.

Human Factors and System Safety in the Management of High-Level Radioactive Waste, Mary L. Lozano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1542-1546.

Human Factors Programs for High-Level Radioactive Waste Handling Systems, Daniel J. Pond, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1547-1554.

Increasing Safety Downstream of Hydropower Facilities, Stephen E. Draper, CF Nov. 91, p239-250.

L'Ambiance Plaza: What Have We Learned, Virginia Fairweather, CE Feb. 92, p38-41.

Laser Interferometric Characterization of Acoustic Emission Transducers, Douglas A. Bruttomesso and Laurence J. Jacobs, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p256-

Mitigation of Dust Contamination During EVA Opera-tions on the Moon and Mars, Peter E. Glaser, (Emp-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1512-1522.

Modern Crane Control Enhancements, Jeffrey T. Hub-bell, Bruce Koch and Dennis McCormick, (Ports '92, David Torseth, ed., 1992), p757-767.

Natural Analogues: The State of Play in 1992, Neil A. Chapman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1695-1700.

Principles of Ground Modification with Electromagnetic Waves, J. C. Santamarina and Y. N. Wakim, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1380-1392.

Reactivity End-Effects Estimates Using A K<sub>00</sub> Perturba-tion Model, Charles R. Marrotta, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p2165-2173.

Reliability Analysis of Partially Restrained Steel Connections, Gregory L. Tucker and Richard M. Bennett, ST Apr. 90, p1090-1101.

Reliability and Probability in Stability Analysis, John T. Christian, Charles C. Ladd and Gregory B. Baecher, Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1071-1111.

Reliability of Portal Frames With Interacting Stress Resultants, Luis Miguel da Cruz Simões, ST Dec. 90, p3475-3496.

Response Variability and Reliability of Plates Using the Weighted Integral Method, Friedrich J. Wall and George Deodatiss, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p41-44.

Role of Designers in Construction Worker Safety, Jimmie Hinze and Francis Wiegand, CO Dec. 92, p677-684.

Safety and Service Life of Equipment Designed for Cold Climate Operation, V. P. Larionov, CR Sept. 92, p111-123.

Safety Programs and The Construction Manager, G. R. Smith and R. D. Roth, CO June 91, p360-371.

Shielding and Criticality at the MRS Facility, Kenneth L.
Ashe, Robert G. Eble and James R. Hilley, Jr., (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2056-2061.

Ship Simulation of the Houston Ship Channel, Houston, Texas, Dennis W. Webb and J. Christopher Hewlett, (Ports '92, David Torseth, ed., 1992), p898-911.

Structural Reliability Analysis Methods for Implicit Per-formance Functions, Y.-T. Wu, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p483-486.

A Systems Reliability Approach to the Safety of Steel Connections, Janice J. Trauter and Richard M. Ben-nett, (Probabilistic Mechanics and Structural and Geo-technical Reliability, Y. K. Lin, ed., 1992), p495-498.

Tolerance Limits for Geometric Imperfections in Hyper-bolic Cooling Towers, A. Alexandridis and N. J. Gard-ner, ST Aug. 92, p2082-2100.

Urban Transit Guides Application of Advanced Train Control, Sesto Vespa and Tom Parkinson, TE Jan./Feb. 92, p146-159.

Use of Drilled Shafts in Stabilizing a Slope, Lymon C. Reese, Shin-Tower Wang and Jeffrey L. Fouse, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332.

Work-Site Safety is a Contractual Issue, CE Aug. 92, p22.

Application of Performance Assessment as a Tool for Guiding Project Work, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p2126-2135.

Criticality Safety and Shielding Design Issues in the Development of a High-Capacity Cask for Truck Transport, Jack K. Boshoven, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2156-2160.

A Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p320-323.

Florida Students Grin and 'Bear' It, CE June 92, pl 1.

The Importance of the Site for the Safety of a Repository for Spent Nuclear Fuel in Sweden, Tonis Papp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2136-2144.

Knowledge Acquisition for Postearthquake Usability Decisions, Zahra-El-Hayat Tazir, Tommaso Pagnoni and Carlo Gavarini, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p147-168.

man, ed., 1992), p147-168.
L'Ambiance Plaza: What Have We Learned, Virginia Fairweather, CE Feb. 92, p38-41.
Ontario Hydro Used Fuel Transportation Assessment, L. Grondin, D. Ribbans and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1209-1215. p1209-1215.

Overview of the Radioactive Waste Management Programme of the OECD/NEA, Jean-Pierre Olivier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p52-56.

1992), p52-56.
Preclosure Assessment of the Canadian Nuclear Fuel Waste Diaposal Concept, K. Johansen, L. Grondin and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p481-488.
Safety Analysis for Waste Transports to the Planned Final Waste Repository KONRAD, F. Lange, D. Gründler and G. Schwarz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p421-426.
Simplified Methods for Assessment of the Structural In-

Program Committee, 1992), p421-420.
Simplified Methods for Assessment of the Structural Integrity of Existing Steel Jacket Platforms in the Gulf of Mexico, Rajiv K. Aggarwal, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p750-769.
Slope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867.

True Stage Sefatu Augustannat Methodology for Con-

Leshchinsky, GT May 90, p851-867.
A Two-Stage Safety Assessment Methodology for Construction Activities, M. H. M. Hassan and B. M. Ayyub, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p515-518.
Validation of Safety Assessment Models as a Process Scientific and Public Confidence Building, Shlomo P. Neuman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1404-1413.

Safety engineering
Drownproofing of Low Overflow Structures, Hans J. Leutheusser and Warren M. Birk, HY Feb. 91, p205-213.

Increasing Safety Downstream of Hydropower Facilities, Stephen E. Draper, CF Nov. 91, p239-250. Retrofitting a Landmark, David L. Houghton, CE Feb. 92, p55-57.

Safety factors

Centrifuge Models of Clay-Lime Reinforced Soil Walls, Erol Güler and Deborah J. Goodings, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1249-

Construction under Fire, Ralph D. Ellis, Jr., CE Nov. 91. p51-53.

Evaluation of Failure Potential in Mudstone Slopes Using Fuzzy Sets, Der-Her Lee and C. Hsein Juang, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p1137-1151.

French Research Program CLOUTERRE on Soil Nailing, F. Schlosser, P. Unterreiner and C. Plumelle, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., den, ed., Rober 1992), p739-750.

1992, p. 139-130.

The Need for a True System Approach for High-Level Waste Management Systems Engineering Recommendations from the U.S. Nuclear Waste Technical Review Board, Dennis L. Price, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p822-826.

ment Program Committee, 1992), p822-826. Physical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SV-101, Rudolph T. Allemann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p610-614. Public Attitudes About Radioactive Waste, Ann S. Bisconti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1-3. Reliability-Rased Piers Court Engineering Program Committee, 1992, p1-3.

Reliability-Based Pier Scour Engineering, Peggy A. Johnson, HY Oct. 92, p1344-1358.

The Role of the Repository Implementer in Providing and Demonstrating Safe Disposal of Radioactive Wastes, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p102-105.

Safety is in the Eye of the Beholder, CE Nov. 92, p10.

Progress on Dam Safety Highlighted at Conference, CE Nov. 92, p21.

Safety research

Coatings Conundrum, CE Dec. 92, p8.

Safer Truss-Type Structures is UConn Researcher's Aim, NE Feb. 92, p16.

A/E Compensation Levels Stay Flat as Vestiges of Recession Linger On, NE July 92, p15.

ASCE 1991 Salary Survey: Summary of Findings, Committee on Employment Conditions and Professional Activities Staff, El Apr. 92, p167-189.

Latest ASCE Salary Index is Released, CE May 92, p78. Latest ASCE Salary Index is Released, CE Oct. 92, p68. Salary for Computer Professionals Varies, CE Nov. 92, p10.

Salary Increases Projected at 4.51%, CE July 92, p11.

Computation of Long-Term Three-Dimensional Hydro-dynamics of New York Bight, Keu W. Kim, David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p500.

Design of Irrigation Distribution System, Steve Robertson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p462-467.

Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), pl71-176.

man, ed., 1992), p171-176.

Modeling the Salinity "History" of Great Egg Harbor Bay, New Jersey, Bryan Pearce, Howard McIlvaine, Ed Simek, Pete Sucsy and Viblu Vivek, (Hydraulic Engineering: Saving a Threatened Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p959-964.

Preliminary Circulation Simulations in Apalachicola Bay, T. S. Wu and W. K. Jones, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p344-356.

Release Alternatives on a 3-D Salinity Simulation, Bernard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-

Reservoir System Reliability Constrained by Natural Salt Pollution, Ralph A. Wurbs and Awes S. Karama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p661-666.

Reuse Simulation in Irrigated River Basin, L. K. Smede-ma, W. Wolters and P. J. Hoogenboom, IR Nov./Dec.

92, p841-851.

Salinity of Rivers: Transfer Function-Noise Approach, Dolores Quílez, Ramón Aragilés and Kenneth K. Tanji, IR May/June 92, p343-359.

State of the Art in Other Ocean Energy Sources, Richard J. Seymour and Preston Lowrey, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p258-275.

Two-Dimensional Circulation Modeling of the Parlico River Estuary, North Carolina, G. L. Giese and Jerad D. Bales, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p607-619.

Using GIS To Locate Salinity on Irrigated Soils, Dennis L. Corwin, Mark Sorensen and James D. Rhoades. L. Corwin, Mark Sorensen and James D. Rhoades, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p468-475.

Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.

Water Quality Effects on Eucalyptus ET, Allen Dong, Kenneth Tanji, Steve Grattan, Fawzi Karajeh and Marc Parlange, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p164-170.

Salt domes

Effect of Water on the Consolidation of Crushed Rock
Salt, M. L. Wang, S. K. Miao, A. K. Maji and C. L.
Hwang, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), p531-534.

Forecasting the Space-Time Stability of Radioactive
Waste Isolation in Salt Formations, E. B. Anderson, A.
I. Karelin, A. S. Krivokhatsiy and V. G. Savonenkov,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p2114-2121.
Solubility of Urany in Brine. Hiromichi Yamazaki, Vas-

mittee, 1992), p2114-2121.
Solubility of Uranyi in Brine, Hiromichi Yamazaki, Vassilios Symeopoulos, Bo Lagerman and Gregory R. Choppin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1607-1611.

Saa water
Reservoir System Reliability Constrained by Natural Salt
Pollution, Ralph A. Wurbs and Awes S. Karama,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p661-666.
Size Temperature, and Rate Effects, on the Fracture

Size, Temperature and Rate Effects on the Fracture Toughness of Saline Ice, Samuel J. DeFranco and John P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p264-267.

ed. and John M. Niedzwecki, ed., 1992), p264-267.

Salt water intrusion

Effects of Sea-Level Rise on Bays and Estuaries, ASCE

Task Committee on Sea-Level Rise and Its Effects on

Bays and Estuaries, HY Jan. 92, p1-10.

Hydraulic Controls on Delaware Estuary Water Quality,

Joseph L. Dillorenzo, Georgia R. Marino, Poshu

Huang, Tavit O. Najarian and M. Llewellyn Thatcher,

(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.

and Nani G. Bhowmik, ed., 1992), p151-157.

Managing Water Supply with Aquifer Storage and Recov
ery, Thomas J. Buchanan and Margaret A. Ibison,

(Water Resources Planning and Management: Saving a

Threatened Resource—In Search of Solutions, Moham
mad Karamouz, ed., 1992), p426-431.

Quasi-Three-Dimensional Optimization Model of Jakar
ta Basin, Brad A. Finney, Samsuhadi and Robert

Willis, WR Jan/Feb 92, p18-31.

A Study of Salt Transport Processes in Delaware Bay,

Willis, WR Jan. Feb. 92, p18-31.
A Study of Salt Transport Processes in Delaware Bay, Roy A. Walters, (Estuarine and Coastal Modeling, Majcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p240-251.
Use of D-C Resistivity to Map Saline Ground Water, Christina L. Stamos, Steven K. Predmore and Adel A. Zohdy, (Irrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman, ed., 1992), p80-85.

ened Resource-In ed., 1992), p80-85.

Salt water-freshwater interfaces
Preliminary Circulation Simulations in Apalachicola Bay,
T. S. Wu and W. K. Jones, (Estuarine and Coastal
Modeling, Malcolm L. Spaulding, ed., Keith Bedford,
ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p344-356.

Bed-Load Transport on Transverse Slope. I, Masato Sek-ine and Gary Parker, HY Apr. 92, p513-535. Mechanics of Saltating Grains. II, Masato Sekine and Hideo Kikkawa, HY Apr. 92, p536-558.

Salts Bridge Deck Distress and Repairs, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p 325-338.

Coal Mine Waste Formation and Changes of Microstructer Under Artificial Salting, Krystyna M. Starzynska and Maria Porebska, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p60-70.

Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29.

Toxic Metals Reduction Process for Waste Sludge, Joseph G. Rabosky and Kashi Banerjee, (Environmental Engi-neering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p388-393.

Moisture Migration Through Concrete Floor Slabs, Robert W. Day, CF Feb. 92, p46-51.

Sample disturbance

Sample Disturbance of Cemented Collapsible Soils, San-dra L. Houston and Mostafa El-Ehwany, GT May 91, p731-752.

Analyzing Fast-Food Drive-Up Window Site Impacts, J. L. Gattis, N. Zaman, G. W. Tauxe and R. S. Marshment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20.

Application of the Sampling Theorem to the Representa-tion of Random Fields, Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p33-36.

Asymptotic Importance Sampling, Marc A. Maes, Karl Breitung and Philippe Geyskens, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p96-99.

Comparison of Some Importance Sampling Techniques in Structural Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p108-111.

Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, K. J. Riggle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2323-2330.

Evaluation of Probabilities Using Orientated Simulation, Alberto H. Puppo and Raul D. Bertero, ST June 92, p1683-1704.

First Order Importance Sampling Method and its Variance Reduction, Gongkang Fu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p568-571.

1992, p306-3; From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314. High Order Statistics in Structural Reliability, A. Masofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p244-

Icon-Based Concept for Exploring Rover Autonomy, J. H. Allton and Damian Lyons, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2400-2411. New Total Sediment-Load Sampler, Leo C. van Rijn and Moustafa T. K. Gaweesh, HY Dec. 92, p1686-1691.

ptimal Importance-Sampling Density Estimator, George L. Ang, Alfredo H-S. Ang and Wilson H. Tang, EM June 92, p1146-1163.

Probabilistic Rotordynamics Analysis Using an Adaptive Importance Sampling Method, Y.-T. Wu, T. Y. Torng, O. H. Burnside and M. H. Rheinfurth, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p491-494.

Properties of Various Sediment Sampling Procedures, Panayiotis Diplas and Jon B. Fripp, HY July 92, p955-

Sample Disturbance of Cemented Collapsible Soils, Sandra L. Houston and Mostafa El-Ehwany, GT May 91, p731-752.

Sampling Errors in U. S. Extreme Wind Records, Jon A. Peterka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p280-

ampling of Wastewater Effluent, Heinz G. Stefan, Thomas R. Johnson and Hugh L. McConnell, EE Mar./Apr. 92, p209-225.

Sampling Techniques for Time-Variant Reliability Prob-lems, R. E. Melchers, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p100-103.

Sediment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p677-682.

082.
Sediment Sampling Techdniques in Complex Environments, John J. Nocera, Gregory P. Matthews and Thomas M. Simmons, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p92-97.

F. Pierce Linaweaver, ed., 1992), p92-97. Surface Sampling of Dry and Underwater Sediment Deposits, Jon Fripp and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p835-858.

Traffic Data Collection: What Really Needs to be Done? A. S. Narasimha Murthy, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p1-5. Uncertainty in Steady-State Liquefaction Evaluation Procedures, Steven L. Kramer, GT Oct. 89, p1402-1419. A Unified Simulation Androach to Structural System Re-

A Unified Simulation Approach to Structural System Re-liability Analysis, Richard C. Turner and Michael J. Baker, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p104-107.

Use of Importance Sampling Constraints in System Optimization, Yingwei Liu and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p112-115.

Sampling designs
Case Study: Design of Groundwater Quality Monitoring Systems, Leonard Cilli and Richard Bizub, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p75-79.
Properties of Various Sediment Sampling Procedures, Panayiotis Diplas and Jon B. Fripp, HY July 92, p955-970.

San Francisco

Airport Landside Management: An Unique Airport Spe-cialty, Louis A. Turpen, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p212-222.

Caltrans/Private Sector Partner Pile Load Test, CE Oct. 92, p15,18.

Development of a Limit-State Seismic Code for Bridges, lan G. Buckle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p164-167.

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p58-71. San Francisco Plans Wastewater Storage Tunnel, CE Oct.

92, p22,24.

Sand
Sand
3-D Effects of Incipient Fluidization of Fine Sands in Unbounded Domains, Gerard P. Lennon, William MacNair, Richard N. Weisman and Jeffrey Lindley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p654-659.

Analysis of Internal Discontinuities in Geo-Materials, Dunja Perić, Stein Sture and Kenneth Runesson, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p292-295.

Anisotropic Hardening Plasticity Model for Sands, Robert Y. Liang and Hann-Ling Shaw, GT June 91, p913-933.

Bearing Capacity of Auger-cast Piles in Sand, William J. Neely, GT Feb. 91, p331-345. Bearing Capacity of Expanded-Base Piles in Sand, Wil-liam J. Neely, GT Jan. 90, p73-87.

Bearing Capacity of Expanded-Base Piles with Compacted Concrete Shafts, William J. Neely, GT Sept. 90, p1309-1324.

Bonding Strength of Grouts and Behavior of Silicate Grouted Sand, C. Vipulanandan and A. Ata, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), ed., Rober p700-711.

Compaction of Granular Soils—Remarks on Quality Control, Michele Jamiolkowski and Erio Pasqualini, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p902-914.

Compressive Strength and Characterization of Failure Modes for Polymer Concrete, S. Mebarkia and C. Vipulanandan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedewecki, ed., 1992), p988-991.

Computation of Flow in Ice-Covered Dune-Bed Channels, J. Y. Yoon, V. C. Patel and R. Ettema, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p385-388.

Computer Simulation of Direct Shear Test, Jeen-Shang Lin, John M. Ting, Baliso Vuba and Shiou Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p425-428.

Deep Compaction by Vibro Wing Technique and Dynamic Compaction, Kaare Senneset and Jarle Nest-vold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p889-901.

Densification of Loose Sands by Deep Blasting, Ulrich La

Fosse and Theodore von Rosenvinge, IV, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p954-968.

p954-968.

Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, Siew-Ann Tan, Kee-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p209-228.

Driving Characteristics of Open-Toe Piles in Dense Sand, Richard D. Raines, Oacar G. Ugaz and Michael W. O'Neill, GT Jan. 92, p72-88.

Earthquake Support Grouting in Sands, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888.

Effect of Footing Shape on Behavior of Cantilever Re-

47924, p8/9-868.
Effect of Footing Shape on Behavior of Cantilever Retaining Wall, John S. Horvath, GT June 91, p973-978.
Effects of K<sub>0</sub> and Overconsolidation on Uplift Capacity, Adel Hanna and Ashraf Ghaly, GT Sept. 92, p1449-1469.

Estimating Earth Pressures Due to Compaction, J. M. Duncan, G. W. Williams, A. L. Sehn and R. B. Seed, GT Dec. 91, p1833-1847.

G1 Dec. 31, p1833-1847.

Evaluation of Fine Asgregate Particle Shape and Texture,
E. R. Brown, P. S. Kandhal and James W. Winford, Jr.,
(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), p216-230.

Fine Ottawa Sand: Experimental Behavior and Theoretical Predictions, Panos Dakoulas and Yuanhui Sun, GT
Dec. 92, p1906-1923.

Hyperconcentrated Sand-Water Mixture Flows over Ero-dible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1525.

Holtz, ed. and llan Juran, ed., 1992), p1031-1041.

Rhee and A. Bezuijen, GT Aug. 92, p1236-1240.

Instability of Slopes with Nonassociated Flow, Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p288-291.

Load Transfer for Pipe Piles in Highly Pressured Dense Sand, Michael W. O'Neill and Richard D. Raines, GT Aug. 91, p1208-1226.

Local Scour Downstream of Box-Culvert Outlets, H. Abida and R. D. Townsend, IR May/June 91, p425-440.

The Mechanical Aging of Soils, John H. Schmertmann, GT Sept. 91, p1288-130.

Mechanical Properties of Microfine Cement/Sodium Sili-

GT Sept. 91, p.1288-1330.

Gehanical Properties of Microfine Cement/Sodium Silicate Grouted Sand, Raymond J. Krizek, Hung-Jiun Liao and Roy H. Borden, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed., and Ilan Juran, ed., 1929, p.688-699.

Micromechanical Model to Predict Sand Densification by Cyclic Straining, Ricardo Dobry and Emmanuel Petrakis, EM Feb. 90, p.288-308.

Minimum Lindenied Strength of Two Sands L. M. Kon.

Minimum Undrained Strength of Two Sands, J.-M. Kon-rad, GT June 90, p932-947. Minimum inimum Undrained Strength Versus Steady-State Strength of Sands, J.-M. Konrad, GT June 90, p948-

Mitigation of Harbor Caused Shore Erosion with Beach Nourishment Delayed Mitigation, St. Joseph Harbor, MI, Charles N. Johnson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p137-153.

The Morphology and Dynamics of Natural and Laboratory Grain Flows, Richard R. McDonald and Robert S. Anderson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p748-751. Neural Network Modeling of the Mechanical Behavior of Sand, Glenn W. Ellis, Chengwan Yao and Rongda Zhao, (Engineering Mechanics, I oren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p421-424. A New Technique for Quality Control of Dynamic Compaction, Chaim J. Poran, King-Sen Heh and Jorge A. Rodriguez, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p915-926.

Ilan Juran, ed., 1992), p913-926.
Particle Analysis of Material Behavior—A Note on Continuum Assumptions, John R. Williams, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p179-183.
Pattern Formation and Time-Dependence in Flowing Sand, R. P. Behringer and G. W. Baxter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1028-1030.
Performance of Axially Loaded Pipe Piles in Sand, Leland M. Kraft, Jr., GT Feb. 91, p272-296.
Permanence of Grouted Sands Erroscot to Various Water.

Permanence of Grouted Sands Exposed to Various Water Chemistries, John M. Siwula and Raymond J. Krizek, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1403-1419.

Permanent Excavation Support and Underpinning in Sands: A Case History, Russell J. Morgan, Lawrence F. Johnsen and Franklin M. Grynkevicz, (Grouting, Soil Improvement and Geosynthelics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.778-

Postdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115.

Preferred Orientation of Pore Structure in Cement-Grouted Sand, Maan Helal and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p526-540.

Properties of Cement Grouts and Grouted Sands with Additives, C. Vipulanandan and S. Shenoy, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992),

p500-511.

p. 100-511.

Realistic Specifications for Manufactured Sand, Charles R. Marek, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p.245-260.

Review of API Guidelines for Pipe Piles in Sand, Magued Iskander and R. E. Olson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p.798-812.

Seismic Repair at Seventh Street Marine Terminal, John A. Egan, Robert F. Hayden, Larry L. Scheibel, Mahmut Otus and Gerald M. Serventi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p867-878.

Site Improvement for a Steel Mill Complex, Eun C. Shin, Bang W. Shin and Braja M. Das, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-828.

828

Skin Friction Distributions on Piles in Sand, Nazrul I. Khan, John S. Templeton, III. and Michael W. O'Neill, (Civil Engineering in the Oceans V, Robert T. -Hudspeth, ed., 1992), p783-797.

Stabilized Active Clay by Sand Admixture, Pat T. Leelani, Maen M. Shaar and Phil V. Compton, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1042-1053.

Static Instability and Liquefaction of Loose Fine Sandy Slopes, Poul V. Lade, GT Jan. 92, p51-71. Submarine Flow Slide in Puget Sound, Leland M. Kraft, Jr., Thomas M. Gavin and Jon C. Bruton, GT Oct. 92, p1577-1591.

pi37-1391.

Time-Dependent Cone Penetration Resistance Due to Blasting, Wayne A. Charlie, Mutabihirwa F. J. Rwebyogo and Donald O. Doehring, GT Aug. 92, p1200-1215.

Ultimate Bearing-Capacity Tests on Sand with Clay Layer, Masanobu Oda and Soe Win, GT Dec. 90, p1902-1906.

Uncertainty in Steady-State Liquefaction Evaluation Pro-cedures, Steven L. Kramer, GT Oct. 89, p1402-1419.

Undrained Shear Strength of Liquefied Sands for Stability Analysis, Timothy D. Stark and Gholamreza Mesri, GT Nov. 92, p1727-1747.

GT Nov. 92, p1727-1747.

Upilt Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaly, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

Use of a Method Specification For In Situ Compaction of Clay-Based Barrier Materials, B. H. Kjartanson, N. Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1129-1136.

Agricultural Drains and Safety of Dams, James M. Verzuh and Glen D. Sanders, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p51-54.

Sand transport
Coastal Geomorphology and Sand Budgets Applied to
Beach Nourishment, Timothy W. Kana and F. David
Stevens, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p.29-44.

Hyperconcentrated Sand-Water Mixture Flows over Ero-dible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1525.

Prediction of Storm/Normal Beach Profiles, Robert A. Dalrymple, WW Mar./Apr. 92, p193-200.

Sandwich panels
Backfill-Stiffened Foundation Wall Design, Robert Nicholls, GT Nov. 92, p1822-1836.
Effects of Bonding Stiffness on Thermal Stresses in Sandwich Panels, R. Hussein, P. Fazio and K. Ha, AS Oct.
92, p480-490.

32, pasto-397.
Sandwich structures
High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheinman, EM May 92, p1026-1043.
Structural Studies of Two Aerobrake Heatshield Panel Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932.

Sanitary landfills
Landfill Storm Water Runoff Control, Paul Makowski
and Daniel Pazdersky, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p423-428.
Moisture and Suction in Sanitary Landfills in Semiarid
Areas, G. E. Blight, J. M. Ball and J. J. Blight, EE
Nov/Dec, 92, p865-87.
Start-Ups, CE May 92, p8.

Saaltary sewers
Graphs for Hydraulic Design of Sanitary Sewers, Venkateswarlu Swarna and Prasad M. Modak, EE May/June
90, p561-574.
Head Losses in Storm Sewer Manholes: Submerged Jet
Theory, Flemming Bo Pedersen and Ole Mark, HY
Nov. 90, p131-1528.
When Sawer Rehab Doesn't Stop Basement Flooding.

Nov. 90, p1311-1326.
When Sewer Rehab Doesn't Stop Basement Flooding,
Thomas Rowlett and Kenneth Kelgard, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p648-653.

Satellite communications
Technology is Here—Are You Ready? Paul A.
LeMenager, ME July 92, p261-266.

Satellite mapping Beyond Push-Button GPS, Alfred Leick, CE June 92, p75-76.

Integrated GPS-INS for High-Accuracy Road Positioning, M. E. Cannon, SU Nov. 92, p103-117.

M. E. Cannon, SU Nov. 92, p103-117.
Irrigation and Drainage System As-Built Map Preparation Using Satellite Digital Imagery and a GIS, Christopher M. U. Neale and Lymann S. Willardson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p311-316.

Applications of Remote Sensing to Drainage, Sun F. Shih, Edwin T. Engman and Christopher Neale, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p547-552.

Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.

Applications of Remote Sensing to Irrigated Agriculture, Christopher M. U. Neale and Richard H. Cuenca, (tra-gation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p541-

Description of the Tropical System Classification of the Tropical System Energy Budget, M. Orgeret, AS Jan. 92, pl-11. Geographical Information System (GIS) Technology in Global Environmental Evaluation—An Overview, Robert C. Lozar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2104-2127.

man, ed., 1992), p523-528.
In-Flight Calibration of Mass Spectrometer, Dumitru Ristoiu, Gavrila Toderean, Iosif Chereji, Daniel Olimpiu Ursu and Vadim Glebovici Istomin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2264-2270.

1992), p2264-2270.
Introduction to Remote Sensing for Irrigation and Drainage, Edwin T. Engman and Richard H. Cuenca, (Irrigation and Drainage: Saving a Threatened Resource—Insection and Drainage: Saving a Threatened Resource—Insection Solutions, Ted Engman, ed., 1992), p529-534.
Low Frequency Astronomy from Lunar Orbit, John P. Basart and Jack O. Burns, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1913-1924.
Metallized Microballoon EMI Shielding Materials, Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.

Oakland Fire Fighters Guided by Satellites, CE Jan. 92,

p83. Rainfall Area Identification Using GOES Satellite Data, Ke S. Cheng and Sun F. Shih, IR Jan./Feb. 92, p179-

190.
Tethers and Their Role in the Space Exploration Initiative, Cheryl D. Bankston, John A. Gilbert and Dennis R. Wingo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p897-908.
The Virtual Mission: A Step-Wise Approach to Large Space Missions, Elaine Hansen, Morgan Jones, Adrian Hooke and Richard Pomphrey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p15/23-152.

Accurate Method for Calculation of Saturation DO, Hesong Hua, EE Sept./Oct. 90, p988-990.

Dynamics of Saturated Rocks. IV: Column and Borehole Problems, Irene Vgenopoulou and Dimitri E. Beskos, EM Sept. 92, p1795-1813.

Harmonic Excitation of an Unconstrained Saturated Particle Bed, Harri K. Kytömaa and Charles C. Abnet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p640-643.

Hydraulic Properties of a Fine-Grained Soil Under Vari-ous Capillary Pressures and Loadings, Aladdin Snaith and John D. Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p648-653.

Review of Wetting-Induced Collapse in Compacted Soil, Evert C. Lawton, Richard J. Fragaszy and Mark D. Hetherington, GT Sept. 92, p1376-1394.

Saturation Flow and Capacity of Shared Permissive Left-Turn Lane, Feng-Bor Lin, TE Sept./Oct. 92, p611-630. Swell versus Saturation for Compacted Clay, Robert W. Day, GT Aug. 92, p1272-1278.

audi Arabia

Owner Involvement in Construction Projects in Saudi Arabia, Abdulaziz A. Bubshait and Abdulaziz A. Al-Musaid, ME Apr. 92, p176-185. Surface and Subsurface Drainage of Metropolitan City in Arid Zone, Achi M. Ishaq, IR Jan

Water Use in Saudi Arabia: Problems and Policy Implica-tions, Abdulla Ali Al-Ibrahim, WR May/June 90, p375-388.

cale effect

Ice Loads on Vertical Bridge Pier at Two Different Model Scales, F. T. Christensen and P. Klinting, CR Sept. 92,

p93-110.
study of Oil Slick Subjected to Nearshore Circulation, A. G. L. Borthwick and S. A. Joynes, EE Nov./Dec. 92, p905-922.
arge-Scale Loading Tests of Shallow Footings in Pneumatic Caisson, Osamu Kusakabe, Yoshito Maeda and Masatoshi Ohuchi, GT Nov. 92, p1681-1695.

Masatoshi Ohuchi, GT Nov. 92, p1681-1695.

Scale models

Broadside Current Forces on Moored Ships, William N.
Seelig, David Kriebel and John Headland, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p326-340.

Current Blockage Effects on Model-Scale Offshore Platform, Timothy D. Finnigan, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p294-310.

Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, C. S. Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, (High Level Radioactive Waste Management, Hogh Level Radioactive Waste Management Program Committee, 1992), p263-271.

Flexural Tensile Strength of Partially Grouted Concrete Masonry, Ahmad A. Hamid, Omar A. Elnawawy and

Fiexural Tensile Strength of Partially Grouted Concrete Masonry, Ahmad A. Hamid, Omar A. Elnawawy and Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393. Flow and Energy Dissipation Over Stepped Gabion Weirs, L. Peyras, P. Royet and G. Degoutte, HY May 92, p707-717. Model Study of Jet-Circulated Grit Chamber, Asher Brenner and Mordechai H. Diskin, EE Nov./Dec. 91, 782-787.

biodeling and Pilot-Scale Experimental Verification for Predenitrification Process, J. Hamilton, R. Jain, P. An-toniou, S. A. Svoronos, B. Koopman and G. Lyberatos, EE Jan./Feb. 92, p38-55.

Wave Barriers: An Environmentally Benign Alternative, Jeffrey F. Gilman and Dennis Nottingham, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p479-486.

Engineering Practice '92, Steven A. Hughes, ed., 1992), p479-486.

Scanning electron microscopes
Alkali Activation of Class C Fly Ash, Amitava Roy, Paul J. Schilling, Harvill C. Eaton and Roger K. Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p104-115.

Automated Identification of Compression-Induced Cracking in Cement Paste, David Darwin, Kirk W. Ketcham, Francisco A. Romero and Jeffrey L. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497.

Coal Mine Waste Formation and Changes of Microstructure Under Artificial Salting, Krystyna M. Skarzynska and Maria Porebska, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p60-70.

Effect of Water on the Consolidation of Crushed Rock Salt, M. L. Wang, S. K. Miao, A. K. Maji and C. L. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p515-534.

Hydrogen Reduction of Lunar Soil and Simulants, Robert O. Ness, Jr., Laura L. Sharp, David W. Brekke, Christian W. Knudsen and Michael A. Gibson, (Engineering Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p617-628.

cattering

Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p956-959.

Three-Dimensional Scattering of Solitary Waves by Verti-cal Cylinder, Keh-Han Wang, Theodore Y. Wu and George T. Yates, WW Sept./Oct. 92, p551-566.

Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, John L. Merriam, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p623-630.

CONSCHED: Expert System for Scheduling of Modular Construction Projects, O. Shaked and A. Warszawski, CO Sept. 92, p488-506.
Construction Project Planning Process Model for Small-Medium Builders, M. G. Syal, F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666.
A Description of LaNDSIM and Its Uses, Thomas S. Russell, Jr., Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitter and Michael E. Zientek, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941. The Design of the Airside Concourses, James M. Suehiro, Edward K. McCagg and J. M. Seracuse, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p207-216.
Energy Efficient Pump Station Operation with a Pump Switching Constraint, Kofi Awumah and Kevin E. Lansey, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p509-304.
Formal Development of Line-of-Balance Technique, Zohair M. Al Sarraj, CO Dec. 90, p689-704.
Knowledge Elicitation Strategies and Experiments Applied to Construction, Jesus M. De La Garza and C.

Zohair M. Al Sarraj, CO Dec, 90, p689-704.

Knowledge Elicitation Strategies and Experiments Applied to Construction, Jesus M. De La Garza and C. William Ibbs, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p69-85.

Knowledge-based System for Duration Estimating and Crew Selection for Construction Activities, Ayman Amorad and Gerardo D. Diaz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p190-198.

Management of Engineering/Design Phase. Neil N. Eldin.

1992), p190-198.
Management of Engineering/Design Phase, Neil N. Eldin, CO Mar. 91, p163-175.
Manhattan Post Office Engulfs a Whole City Block, CE Jan. 92, p13-14.
Object-Oriented Programming, Walid T. Keirouz, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p80-103.
Optimal Long-Term Scheduling of Bridge Dock Replacement and Rehabilitation, Timothy L. Jacobs, TE Mar/Apr. 92, p.312-322.

Optimal Long-Term Scheduling of Bridge Deck Replacement and Rehabilitation, Timothy L. Jacobs, TE Mar./Apr. 92, p312-322.
Optimal Pump Scheduling in Water-Supply Networks, Paul W. Jowitt and George Germanopoulos, WR July/Aug. 92, p406-422.
Optimal Scheduling of Consecutive Landfill Operations with Recycling, Timothy L. Jacobs and Jess W. Everett, EE May/June 92, p420-429.
Planning Simulation Model of Irrigation District, Jesüs Chávez-Morales, Miguel A. Mariño and Eduardo A. Holzapfel, IR Jan./Feb. 92, p74-87.
The Potential Application of Military Fleet Scheduling Tools to the Federal Waste Management System Transportation System, I. G. Harrison, R. B. Pope, R. D. Kræmer and M. R. Hilliard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1324-1329.
Schedule "Games" People Play, and Some Suggested "Remedies", James G. Zack, Jr., ME Apr. 92, p138-132.

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Scheduling Demand-Responsive Transportation Vehicles Using Fuzzy-Set Theory, Shinya Kikuchi and Robert A. Donnelly, TE May/June 92, p391-409. Scheduling of Ground Water Pumpage in Alluvial Aquifers to Minimize the Impact on Surface Water Diversions, John C. Tracy and Munjed Al-Sharif, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p79-83. Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, Walld Y. Thabet, Ayman A. Morad and Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, p327-736.

ASCE Awards \$58,000 in Study Grants to Civil Engineer-ing Students, NE Oct. 92, p10.

Hunt Scholarship Fund Nears Goal, CE June 92, p82. Johnston Fund Grows at Lehigh, CE May 92, p82.

Tomorrow's Schools, Socrates Ioannides and Robert P. Beall, CE Jan. 92, p56-58.

Addressing Bridge Scour When Funding Falls Short, John N. Paine, Robert J. Leedy, Jr. and James N. Wigfield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p204-209. Advancing Bridge-Pier Scour Engineering, Peggy A. John-son, El Jan. 91, p48-55.

Assessing Time-Variant Bridge Reliability Due to Pier Scour, Peggy A. Johnson and Bilal M. Ayyub, HY June 92, p887-903.

92, p881-903.

Bridge Pier Scour with Debris Accumulation, Bruce W. Melville and D. M. Dongol, HY Sept. 92, p1306-1310.

Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1094-1099.

BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906-911.

Controlling Mechanism of Local Scouring, Bijan Dargahi, HY Oct. 90, p1197-1214.

esign and Construction of Shinnecock Inlet, New York, Gilbert K. Nersesian and Lynn Marie Bocamazo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p554-570.

Effect of Spoilers on Scour at Submarine Pipelines, Yee-Meng Chiew, HY Sept. 92, p1311-1317.

Effects of Footing Location on Bridge Pier Scour, J. Sterling Jones, Roger T. Kilgore and Mark P. Mistichelli, HY Feb. 92, p280-290.

HY Feb. 92, p280-290.
An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536.
Estimating Wave-Induced Bottom Velocities at Vertical Wall, Steven A. Hughes, WM Mar./Apr. 92, p175-192.
Geomorphic and Hydraulic Factors Affecting Stream Stability at New York Thruway Bridges, Sufian A. Khondker, Keith E. Giles, Carl J. Montana and Mark A. Hixson, (Hydraulic Engineering: Saving a Threamend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p912-918.
The Influence of Rectangular Pier Foundation on Local

nings, ed. and Nani G. Bhowmik, ed., 1992), p912-918.
The Influence of Rectangular Pier Foundation on Local Scour, A. C. Parola, D. A. Schaefer, A. El-Khoury and B. M. Brown, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jenings, ed. and Nani G. Bhowmik, ed., 1992), p132-137.
Local Scour at Bridge Abutments, B. W. Melville, HY Apr. 97 e615-6318. Apr. 92, p615-631.

Local Scour Downstream of Box-Culvert Outlets, H. Abi-da and R. D. Townsend, IR May/June 91, p425-440.

Manitude of the Scour Evaluation Program, Lawrence J. Harrison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1067-1071.

Merging Field & Laboratory Bridge Scour Data, J. Ster-ling Jones, Peggy A. Johnson and Arthur C. Parola, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1100-1105.

Observations on Flow Around Bridge Piers, Ferdous Ahmed and Naliamuthu Rajaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jenning, ed. and Nani G. Bhowmik, ed., 1992), p834-839.

Prediction Method for Local Scour by Warmed Cooling Water Jets, S. Ushijima, T. Shimizu, A. Sasaki and Y. Takizawa, HY Aug. 92, p1164-1183.

Probability of Bridge Failure Due to Pier Scour, P. A. Johnson and B. M. Ayub, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p690-695.

Reliability-Based Pier Scour Engineering, Peggy A. Johnson, HY Oct. 92, p1344-1358.

Risk-Costs for Scour at Unknown Bridge Foundations, G. Kenneth Young, Stuart M. Stein and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111.
Scour Around a Vertical Pile in Waves, B. Mutlu Sumer, Jørgen Fredsøe and Niels Christiansen, WW Jan/Feb.

92, p15-31.

74, p13-31.

Scour Downstream of Grade-Control Structures, Noel E. Bormann and Pierre Y. Julien, HY May 91, p379-594.

Scour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, Hydrallic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Scour Hole Development and Stabilization at Shinnecock

G. Bnowmix, ed., 1992), po4-09.
Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-bsi Chu and Gilbert K. Nersesian, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.
Scour Protection at Bridge Piers, Yee-Meng Chiew, HY Sept. 92, p1260-1269.

Sepage Effects on Bridge Pier Scour, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p919-924.

Seepage Influence on Stability of Bridge Abutments, D. J. Hagerty and A. C. Parola, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

South Jetty Scour Hole Stabilization, Ocean City, Maryland, Gregory P. Bass and Edward T. Fulford, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p583-597.

Status of Scour Instrumentation Development, Roy Trent and Ian Friedland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1088-1093.

Study of Groins on the Middle Rio Grande, Drew C. Baird and Cassie C. Klumpp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nail G. Bhowmik, ed., 1992), p822-827.

1992), p822-827.
Study of Time-Dependent Local Scour Around Bridge Piers, A. Melih Yanmaz and H. Doğan Altınbilek, HY Oct. 91, p1247-1268.
Temporal Variation of Scour Around Circular Bridge Piers, Umesh C. Kothyari, Ramchandra J. Garde and Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.
Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p70-75.
Two-Dimensional Hydraulic Analysis of the Owensboro Bridge and Approaches, M. A. Ports, T. G. Turner and D. C. Froehlich, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p280-286. 286

United States Geological Survey Bridge Scour Evaluation Program in Texas, David D. Dunn and Henry R. Hejl, Ir., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1922), p82-84. Update: Bridge Scour, Frank Huber, CE Sept. 91, p62-63.

Use of Machine Vision in Bedform Studies, Peter A. Mantz and Wenxue Li, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p840-845.

Scouring
57 Years of Coastal Engineering Practice at a Problem Inlet: Indian River Inlet, Delaware, Jeffrey A. Gebert, Keith D. Watson and Augustus T. Rambo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p.503-519.

Controlling Mechanism of Local Scouring, Bijan Dargahi, HY Oct. 90, p1197-1214.

Stabilization of Pier Foundation Using Jet Grouting Techniques, R. Parry-Davies, R. M. H. Bruin, G. Wardle and M. G. Nixon, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p 156-168.

Screening
Magnitude of the Soour Evaluation Program, Lawrence J.
Harrison, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p1067-1071.

Municipal Field Screening Analyses, Gene N. Rattan and
John L. McDaniel, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p50-

35.
A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416.
Screening Old Offshore Platforms: Previous Approaches and Further Thoughts, Peter W. Marshall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p518-530.

Screens
Advantages of Installing Influent Fine Screens at a Large
Wastewater Treatment Plant, George G. Balog, Dave
Montgomery, Amarjit Sokhey, Manu A. Patel and
Norman R. Prima, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F.
Pierree Linaweaver, ed., 1992), p287-290.
Particle Motion in Rotary Screen, Richard Ian Stessel and
S. C. Kranc, EM Mar. 92, p604-619.
Screen Breakwaters, A. N. Williams and W. W. Crull,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p332-335.

Sen floor

Sea noor

A Fourier Series Solution to Bottom Roughness Induced Stresses During Pipe Laying, Naum Kershenbaum, J. T. Powers and Donald Chang, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p1006-1035. Hyperconcentrated Sand-Water Mixture Flows over Erodible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov.

92, p1508-1525.

Dick R. Mastierigen and Henk van Rossum, HT Nov. 92, p1598-1525.

Influence of Seafloor on Acoustic Plane Wave, L. H. Huang, EM Oct. 92, p1987-2004.

Reliable Design-Wave Force Predictions for Seabed Pipelines, Robert A. Grace, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p481-495.

Response of Cross-Anisotropic Seabed to Ocean Waves, Behrouz Gatmiri, GT Sept. 92, p1295-1314.

Sea Floor Wave-Induced Water Kinematics for Design of Pipeline, Leon Borgman and Robert Hudspeth, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p444-466.

Use of X-Ray Computed Tomography in the Study of Marine Sediments, Thomas H. Orsi, Aubrey L. Anderson, John N. Leonard, William R. Bryant and Carl M. Edwards, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p968-982.

Wave-Induced Effective Stress in Seabed and Its Momentary Liquefaction, Tetsuo Sakai, Katsuya Hatanaka and Hajime Mase, WW Mar/Apr. 92, p202-206.

Sea level Effects of Sea-Level Rise on Bays and Estuaries, ASCE Task Committee on Sea-Level Rise and Its Effects on Bays and Estuaries, HY Jan. 92, pl-10. Gearing up for the Deluge, CE Oct. 92, p8. Global Warming and Possible Effects on the Central and Southern Florida Project, James W. Vearil, (Water Resources Planning and Management: Saving a Threatmed Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p13-18.

Sea walls
Design of Protective Dunes at Dam Neck, Virginia, John
R. Headland, (Coastal Engineering Practice '92, Steven
A. Hughes, ed., 1992), p251-267.
Dutch Experience on Design of Dikes and Revetments,
Krystian W. Pilarczyk, (Coastal Engineering Practice
'92, Steven A. Hughes, ed., 1992), p794-813.
Historic Seawalls of the Boston Harbor, Massachusetts
Region: Evolution, Construction and Repair, David B.
Vine and Peter S. Rosen, (Ports '92, David Torseth, ed.,
1992), p849-867.
Sandbridge Virginia Oceanfront Seawall Arbitration
Hearing: Some Lessons Learned for Coastal Engineers,
David R. Basco, Robert A. Dolan and Carter Sinclair,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p1003-1020.

Sea Defence System at Herne Bay, England, J. H. de Vroeg, J. van Overeem, A. G. Roberts and M. R. Beck, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p90-103.

User-Friendly PC-Based Design Package for Gravity-Type Seawalls, K. W. Chau, WW May/June 92, p267-279.

Accurate Method for Calculation of Saturation DO, Hesong Hua, EE Sept./Oct. 90, p988-990.

Hesong Hua, Expert. Oct. 19, 1988-990.

A Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, M. L. Spaulding, K. Jayko, T. Isaji, E. L. Anderson, Howlett, J. C. Swanson, D. Mendelsohn and S. Puckett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175.

Sawater Corrosons and Control of the Cathodic Protection of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p732-747.

Sealants
 Mars Containers: Dust on Teflon Sealing Surfaces, H. V.
 Lauer, Jr. and J. H. Allton, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p508-517.
 Masonry Wall and Window System Leakage Investigation for University Building, John Frauenhoffer, CF May 92, p107-115.

Stress Relaxation Analysis for Sealants, Chi-Ping Wang and Frank E. Weisgerber, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p240-243.

### Sealing

Concrete for Sealing Voids in Rubble Structures, D. P. Simpson, B. D. Neeley and D. M. Walley, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p847-861.

Concrete Surface Treatments—A Selection Guide, P. James Bruner, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482.

ed., 1992), 94 to 482. Effectiveness of Injected Cement Grout under Harsh Environmental Conditions, G. Ballivy, J. C. Colin and T. Mnif, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p588-600.

Evaluations of Glass Vitrification Techniques on Iron Ratio Determinations, R. B. Spencer, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2399-2405.

Fracture Grouting with Bentonite Slurries, C. Ran and J. J. K. Daemen, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p360-371.

ed. and Ilan Juran, ed., 1992), p360-371.

Pavement Surface Maintenance: Overview of SHRP H-106 Experimental Installations, Russell Romine, David Peshkin, Kelly Smith and Tom Wilson, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p146-159.

Proposed Sealing Field Tests for a Potential High-Level Radioactive Waste Repository in Unsaturated Tuff, Joseph A. Fernandez, John B. Case and Joseph Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2290-2297.

Successful High Traffic Chip Seal Construction, Scott Shuler, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p186-205.

p186-205. Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, J. B. Case, J. A. Fernandez and J. R. Tyburski, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2298-2305. Transport of Multiassembly Sealed Canisters, R. D. Quinn, R. A. Lehnert and J. M. Rosa, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2219-2226.

Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1196-1199.

p1196-1199.

Seasonal variations
Conceptual Basis of Seasonal Streamflow Time Series
Models, Jose D. Salas and J. T. B. Obeysekera, HY
Aug. 92, p1186-1194.
Installation and Monitoring of Thermal Conductivity
Suction Sensors in a Fine-Grained Subgrade Soil Subjected to Seasonal Frost, Walaa E. I. Khogali, Kenneth
O. Anderson, Julian K. Gan and Delwyn G. Fredlund,
(Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed.,
1992), p153-167.
Instrumentation for Characterizing Seasonal Change in

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, Richard S. Haupt and Dale C. Bull, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p125-137.

RODERT A. EASON, ed., 1992), p123-131.
Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monsoon Climate of Tamil Nadu, India, Charles Rodgers and Mark Svendsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engage 44, 1992), p347.

Mark Svendsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347.
Predicting Sediment Loads, Krishan P. Singh and Ali Durgunoglu, CE Oct. 92, p64-65.
Seasonal Monitoring of Pavements—A Whole Lot More, Cheryl Allen Richter, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p182-195.
Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Seasonal Timescale, Eugene J. Wei, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p430-440.

Case Study—Elliott Bay Marina Floating Moorage, Craig S. Funston, (Ports '92, David Torseth, ed., 1992), p263-274.

A Comprehensive Approach to Container Terminal Plan-ning: Striking a Balance, William D. Friedman, (Ports '92, David Torseth, ed., 1992), p29-42.

Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p38-40. Seattle Swings Again, Rita Robison, CE July 92, p46-49.

Secondary flow Drownproofing of Low Overflow Structures, Hans J. Leu-theusser and Warren M. Birk, HY Feb. 91, p205-213.

Secondary systems
Experimental Study of Secondary Systems in Base-Isolated Structure, G. Juhn, G. D. Manolis, M. C. Con-stantinou and A. M. Reinhorn, ST Aug. 92, p2204-

Power Flow and Energy in Primary-Secondary Systems, G. Chen and T. T. Soong, EM May 92, p1046-1051. Response of Systems with Uncertain Parameters to Sto-chastic Excitation, H. Jensen and W. D. Iwan, EM May

92, p1012-1025.

Secondary Stresses in Closed Orthotropic Deck Ribs at Floor Beams, Roman Wolchuk and Alexis Ostapenko, ST Feb. 92, p582-595.

action under Fire, Ralph D. Ellis, Jr., CE Nov. 91, p51-53

Securing Strategic National Security Objectives Through Maritime Activities, S. G. Phernambucq and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-

Sediment
Beach Nourishment with Aragonite and Tuned Structures, Kevin R. Bodge, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p73-89.
Bed-Load and Suspended-Load Transport of Nonuniform Sediments, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HV June 91, p774-87.
Cohesionless Fine-Sediment Bed Forms in Shallow Flows, Peter A. Mantz, HV May 92, p743-764.
A Design Manual for Coastal Fluidization Systems, Richard N. Weisman, Gerard P. Lennon and James E. Clausner, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p862-878.

Drag Coefficient and Fall Velocity of Nonspherical Parti-cles, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY May 91, p660-667.

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, James D. Bowen, Steven H. Wolf and Curtis A. Meininger, (*Ports* '92, David Torseth, ed., 1992), p443-455.

Dynamic Effect of Sediment on Dam Hydrodynamics Bang-Fuh Chen, Kuo-Chyang Chang and Tin-Kar Hung. (Engineering Mechanics, Loren D. Lutes, ed and John M. Niedzwecki, ed., 1992), p345-348.

Environmental Engineering Options for Managing Con-taminted Sediment, Norman R. Francingues, Jr. and Daniel E. Averett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p994-

Equations for Compression Index Approximation, A. W. N. Al-Khafaji and O. B. Andersland, GT Jan. 92, p148-153.

Field Analysis of Contaminated Sediments by Immunoas-say, Deborah J. Mossman, Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p110-115.

Flux of Metals Between Sediment and the Water Column, N. S. Simon and K. O. Dennen, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p390-391.

Influence of Structure and Composition on Resid Soils, Laurence D. Wesley, GT Apr. 90, p589-603.

Interpreting Dredge Material Bioassay Data—COBIAA, Charles H. Lutz, Thomas M. Dillon, Mark H. House and Jeff R. Wright, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p108-113.

An Intrusive Fluid Mud Surveying System, Allen Teeter, Glynn Banks, Michael Alexander and Andrew Salkield, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017.

and van G. Bowmis, ed., 1992, p.1012-1017.

NCASI Experiments Related to Validation of Sediment-Water Column Exchange Models for Hydrophobic Chemicals, Steven W. Hinton and Ray C. Whittemore, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p387-389.

Predicting Effluent PCBs From Superfund Site Dredged Material, Edward L. Thackston and Michael R. Paler-mo, EE Sept./Oct. 92, p657-665.

Prediction of Sedimentgraph from a Small Watershed in Poland in a Changing Environment, K. Banasik and D. E. Woodward, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p493-498.

Properties of Various Sediment Sampling Procedures, Panayiotis Diplas and Jon B. Fripp, HY July 92, p955-

Response of Cross-Anisotropic Seabed to Ocean Waves, Behrouz Gatmiri, GT Sept. 92, p1295-1314.

Behrouz Gatmin, GT Sept. 92, pl 295-1314.

Sediment Rating Curves Based on Ranked Values, Wolfgang Summer and Jean-Pierre Villeneuve, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p683-688.

Sediment Sampling Techdniques in Complex Environments, John J. Nocera, Gregory P. Matthews and Thomas M. Simmons, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p92-97.

Should the U.S. Accept the Concept of Navigable Depth?
John B. Herbich, Dilip Trivedi, Gordon Wilkinson and
Allen Teeter, (Coastal Engineering Practice '92, Steven
A. Hughes, ed., 1992), p1069-1082.

Tackling Trapped Sediments, Scott A. Jenkins, Joseph Wasyl and David W. Skelly, CE Feb. 92, p61-63.

Thermal Stratification Modeling of Lakes with Sediment Heat Flux, Ting-Kuei Tsay, Gordon J. Ruggaber, Steven W. Effler and Charles T. Driscoll, HY Mar. 92, p407-419.

Use of X-Ray Computed Tomography in the Study of Marine Sediments, Thomas H. Orsi, Aubrey L. Anderson, John N. Leonard, William R. Bryant and Carl M. Edwards, (Crist Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p968-982.

Velocity Distribution in Uniform Sediment-Laden Flo Motohiko Umeyama and Franciscus Gerritsen, HY Feb. 92, p229-245.

Wave Induced Vortex Near Seashore, Tai-Wen Hsu, Shan-Hwei Ou and Chun-Wei Sun, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p466-469.

Cadlin

Sediment concentration

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066.

Entropy-Based Velocity Distribution Model in Study of Distribution of Suspended-Sediment Concentration, Chao-Lin Chiu and Corey A. Rich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p520-525.

First Step Away from Lacey's Regime Equations, Michael A. Stevens and Carl F. Nordin, Jr., HY Nov. 90, p1422-1425.

p1422-1423.
The Net-Flux Sediment Concentration Bottom-Boundary Condition for Rippled Beds, César Mendoza-Cabrales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p126-131.
Prediction of Sedimentgraph from a Small Watershed in Poland in a Changing Environment, K. Banasik and D. E. Woodward, (Irrigation and Drainage: Saving a Threatened Resource—In Search Solutions, Ted Engman, ed., 1992), p493-498.
Sediment Concentration Chanees Caused by Barse Tows.

Sediment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p671

Vertical Distribution of Suspended Sediment in Uniform Open-Channel Flow, Motohiko Umeyama, HY June 92, p936-941.

Vertical Sediment Distribution, Jin Ren Ni and Guang Qian Wang, HY Sept. 91, p1184-1194.

Sediment control
BRASS Modeling of Loiza Reservoir, Puerto Rico, for
Sediment Management Operations, Gregory L. Morris,
Raul Colón, Robert Laura and G. T. Anderson, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p837-842.

Contaminated Sediment Transport During Floods, Thomas A. Fontaine, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p210-

Design Guidelines for a Sedimentation Control System at Open Channel Diversions, Vincent S. Neary and A. Jacob Odgaard, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p198-2022

HEC-6 Modeling of Sediment Management in Loiza Reservoir, Puerto Rico, Gregory L. Morris and Guangdou Hu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p630-635.

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertaintees of Sediment Transport Parameters, Carlos C. Carriaga and Larry W. Mays, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jenning, ed. and Nani G. Bhowmik, ed., 1992), p526-531.

Multiuser Sites for Contaminated Sediment Disposal, Pieter N. Booth and Kimberly A. Henson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p96-101.

Rock Creek—Cresta Sediment Management Plan, Larry L. Harrison, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p102-107. Sediment Management with Submerged Vanes. II: Applications, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

diment deposits

Sediment deposits
An Acoustic Impedance Method for Subbottom Material Characterization, Richard G. McGee and Robert F. Ballard, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1030-1035.

Benthic Exchange of Toxic Contaminants, Steve C. McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik.

tions, Marshall Jennings, etc. and the deficiency, 1929, p.386.
Erosion of a Thin Lutocline Under Homogeneous Turbulence, Panagiotis D. Scarlatos, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 2020, 2021, 2028.

1992), p263-268.

1992), p263-268.
Summary of Noncohesive Sediment Transport Processes at the Bed/Water Column Interface, David H. Schoellhamer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p375-

Sourface Sampling of Dry and Underwater Sediment Deposits, Jon Fripp and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

Rackling Trapped Sediments, Scott A. Implies, Ioseph

annowmik, ed., 1992), p853-858.
Tackling Trapped Sediments, Scott A. Jenkins, Joseph Wasyl and David W. Skelly, CE Feb. 92, p61-63.
Using a Numerical Model to Evaluate Dredging Options, Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1024-1029.

Aggradation-Degradation Process in Alluvial Channels, Chin-lien Yen, Shou-young Chang and Hong-Yuan Lee, HY Dec. 29, p1651-1669.

Boundary Conditions for Sediment-Laden Flows, Mar-celo H. Garcia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jeanings, ed. and Nani G. Bhownik, ed., 1992), p404-

409.

New Total Sediment-Load Sampler, Leo C. van Rijn and Moustafa T. K. Gaweesh, HY Dec. 92, pl686-1691.

Predicting Sediment Loads, Krishan P. Singh and Ali Durgunoglu, CE Oct. 92, p64-65.

Suspended Sediment-Transport Capacity for Open Channel Flow, Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204.

Vertical Distribution of Suspended Sediment in Uniform Open-Channel Flow, Motohiko Umeyama, HY June 92, p936-941.

Sediment transport
Aggradation-Degradation Process in Alluvial Channels,
Chin-lien Yen, Shou-young Chang and Hong-Yuan Lee,
HY Dec. 92, p1651-1669.

Alluvial Canals Adequacy, Siddig E. Ahmed, IR July/ Aug. 92, p543-554.

Application of a Beach Plan Evolution Model in Sergipe, Brazil, Otavio J. Sayao and K. C. Ander Chow, (Coast-al Engineering Practice '92, Steven A. Hughes, ed., 1992), p234-250.

Bank Erosion Study of the Nile River at Bani Mazar, A. F. Ahmed and M. M. Gasser, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p816-821.

Beach-Nourishment Performance Predictions, R. G. Dean and Chul-Hee Yoo, WW Nov./Dec. 92, p567-

Bed-Load Coefficients, Raul Pacheco-Ceballos, HY Oct.

Ji 190-1942.
 Coastal Geomorphology and Sand Budgets Applied to Beach Nourishment, Timothy W. Kana and F. David Stevens, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p29-44.

Coastal Processes and Engineering on a Micronesian Fringing Reef, Stanley J. Boc, Jr., William J. Reynold and Jasmina M. Dobinchick, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p285-302.

Computational Model Verification Test Case Using Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p436-441.

Bhowmik, ed., 1992), p436-441.
Computer Simulation of Granular Flows, Thomas G.
Drake, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), p752-755.
Computer Simulation of River Channel Changes at a
Bridge Crossing on a Point Bar, Howard H. Chang,
Marshall E. Jennings and Steve Olona, (Hydradlic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p76-81.

Bhowmik, ed., 1992), p76-81.

Conceptual Bed-Load Transport Model and Verification for Sediment Mixtures, Shaohua Marko Hsu and Forrest M. Holly, Jr., HY Aug. 92, p1135-1152.

Contaminated Sediment Transport During Floods, Thomas A. Fontaine, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p210-212.

212.
Controlling Mechanism of Local Scouring, Bijan Dargahi, HY Oct. 90, p1197-1214.
Design Considerations for Small Artificial Islands in Franks Tract, California, Craig H. Everts, Vedat Demirel, Russell H. Boudreau, Emp T. Carpenter and Richard Dornhelm, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p779-793.
Development of Bed Features, Arved J. Raudkivi and Hans-H. Witte, HY Sept. 90, p1063-1079.
Discrete Mechanics of Sediment Transport, Peter K. Haff, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p756-759.
Environmental Monitoring and Operator Guidance Sys-

Environmental Monitoring and Operator Guidance System (EMOGS) for Shallow Water Ports, Andrew L. Silver, (Ports '92, David Torseth, ed., 1992), p535-547.

First Step Away from Lacey's Regime Equations, Michael A. Stevens and Carl F. Nordin, Jr., HY Nov. 90, p1422-1425.

ally Coupled Unsteady Mobile Boundary Flow Model (FCM), Luís R.P. Correia, Bommanna G. Krishnappan and Walter H. Graf, HY Mar. 92, p476-494.

and waiter H. Graf, HY Mar. 72, pa 16-394.
A GIS Based Synthetic Watershed Sediment Routing Model, Roger H. Smith, Surya N. Sahoo and Larry W. Moore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p200-207.

Mohammad Karamouz, ed., 1992), p200-207.

HEC-6 Modeling of Sediment Management in Loiza Reservoir, Puetro Rico, Gregory L. Morris and Guangdou Hu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p630-635.

In-Channel Sediment Basins: An Alternative to Damstyle Debris Basins, Wendy S. Gist, Scott E. Stonestreet and Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1000-1005.

Incipient Motion during Static Armoring, Anders Worman, HY Mar. 92, p496-501.

Wörman, HY Mar. 92, p496-501.

Laboratory Investigation of Beach Profiles in Tailings Disposal, Xiaosheng Fan and Jacob Masliyah, HY Nov. 90, p1357-1373.

Longshore Sediment Transport Rate at Morro Bay, CA, James M. Kaihatu, Chris Andrassy and Edward F. Thompson, (Caastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p615-631.

Longshore-Transport Model for South Indian and St. Lankan Coasts, P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-424.

Menu of Coupled Velocity and Sediment-Discharge Relations for Rivers, M. Fazle Karim and John F. Kennedy, HY Aug. 90, p78-996.

Model for Determining Optimal Reservoir Releases to Model for Determining Optimal Reservoir Releases to

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertainties of Sediment Transport Parameters, Carlos C. Cariaga and Larry W. Mays, [Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p526-531.

Modeling Three-Dimensional Circulation and Sediment Transport in Lakes and Estuaries, Y. Peter Sheng, D. E. Eliason and X.-J. Chen, (Estuarine and Coastal Model-ing, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p105-115.

50B, ed., 1792, pto-r112.
The Net-Flux Sediment Concentration Bottom-Boundary Condition for Rippled Beds, César Mendoza-Cabrales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p126-131.
Nam. Tatle Sediment Loud Sampler, Loud Capragnetics.

New Total Sediment-Load Sampler, Leo C. van Rijn and Moustafa T. K. Gaweesh, HY Dec. 92, p1686-1691.

Note on Lag in Bedload Discharge, Subhash C. Jain, HY June 92, p904-917.

A Numerical Simulation Approach to Estimating Disposal Site Stability, Norman W. Scheffner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1006-1011.

Observation of the Post-Construction Performance of a System of Groins along an Eroding Beach, C. I. Mout-zouris, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-319.

rtugnes, ed., 1992), p303-319.
A PC Modelling System for the Simulation of Transport and Fate of Solutes and Suspended Substances, A. Christina Ellegaard, Jesper Weiergang and Helmer M. Petersen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p188-201.

p188-201.

A Review of Mathematical Models for Fine Sediment Transport Processes, Y. Peter Sheng, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p381-385.

River Bed Degradation Due to Abrupt Outfall Lowering, C. W. Lenau and A. T. Hjelmfelt, Jr., HY June 92,

p918-933.

Rock Creek—Cresta Sediment Management Plan, Larry L. Harrison, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p102-107.

Routing of Heterogeneous Sediments over Movable Bed: Model Development, Andre van Niekerk, Koen R. Vogel, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p246-262.

Routing of Heterogeneous Sediments over Movable Bed: Model Verification, Koen R. Vogel, Andre van Niek-erk, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p263-279.

Santa Barbara Harbor Assessment of Shoaling Frequency, Russell H. Boudreau, Alan Alcorn and Stephen Fine, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p447-461.

Scour Downstream of Grade-Control Structures, Noel I Bormann and Pierre Y. Julien, HY May 91, p579-594.

Sediment and Aquatic Habitat in River Systems, ASCE Task Committee on Sediment Transport and Aquatic Habitats, Sedimentation Committee, HY May 92, p669-687.

Sediment Management with Submerged Vanes. II: Applications, A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302.

Short Beach Nourishment Fill Performance on an Irregu-lar Coatline, Douglas W. Mann, Lamont W. Curtis and Thomas H. Daniel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119.

Simple Conceptual Explanation of Down-Drift Offset In-lets, Scott L. Douglass, WW Mar/Apr. 91, p136-142.

lets, Scott L. Douglass, WW Mar/Apr. 91, p.136-142.
Summary of Noncohesive Sediment Transport Processes at the Bed/Water Column Interface, David H. Schoellhamer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p375-390.

Suspended Sediment-Transport Capacity for Open Chan-nel Flow, Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204.

The Transport and Fate of Drilling Muds, M. Kathryn Pickens and Wilbert J. Lick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p202-214.

Using a Numerical Model to Evaluate Dredging Options, Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992). Jennings, eq p1024-1029.

diment yield

Sedlment yield
Calibrating SHE Soil-Erosion Model for Different Land
Covers, J. M. Wicks, J. C. Bathurst and C. W. Johnson,
IR Sept./Oct. 92, p708-723.
Prediction of Sedimentgraph from a Small Watershed in
Poland in a Changing Environment, K. Banasik and D.
E. Woodward, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p493-498.

Sedimentary rock
Differential Motions in Sedimentary Valleys, Apostolos
S. Papageorgiou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

al and Geolechnical Restability, 1. R. Lin, cu., 1574., p400-403.
A Geologist's Perspective on Dam Foundation Grouting, Kenneth D. Weaver, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p639-650.
High-Resolution Interwell Seismic Experiments in Sedi-mentary Formations, Jorge O. Parra and Brian J. Zook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p519-532.

M. Niedzwecki, ed., 1992), p519-532.
Sedimentation
BRASS Modeling of Loiza Reservoir, Puerto Rico, for Sediment Management Operations, Gregory L. Morris, Raul Colón, Robert Laura and G. T. Anderson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p837-842.
Bridge Pier Scour with Debris Accumulation, Bruce W. Melville and D. M. Dongol, HY Sept. 92, p1306-1310.
Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1094-1099.
Channel Restoration Above Elephant Butte Reservoir,

Channel Restoration Above Elephant Butte Reservoir, Christopher A. Gorbach, [Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 14-119.

1992), pl 14-119.

Citical Evaluation of Thickening Theories, Athanasios Papanicolaou and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshali Jennings, ed. and Nani G. Bhowmik, ed., 1992), p735-740.

Design Guidelines for a Sedimentation Control System at Open Channel Diversions, Vincent S. Neary and A. Jacob Odgaard, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p198-203.

203.
Finite Element Modeling of Storm Water Runoff Using GRASS GIS, Baxter E. Vieux and James Westervelt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p712-718.
HEC-6 Modeling of Sediment Management in Loíza Reservoir, Puerto Rico, Gregory L. Morris and Guangdou Hu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p630-635.
Improvement of Flow in Final Settling Tanks, Ulrich Bretscher, Peter Krebs and Willi H. Hager, EE May/June 92, p307-321.
Local Scour at Bridge Abutments, B. W. Melville, HY

June 92, p307-321.

Local Scour at Bridge Abutments, B. W. Melville, HY
Apr. 92, p615-631.

Longshore Sediment Transport Rate at Morro Bay, CA,
James M. Kaihatu, Chris Andrassy and Edward F.
Thompson, (Coastal Engineering Practice '92, Steven
A. Hughes, ed., 1992), p615-631.

Menu of Coupled Velocity and Sediment-Discharge Relations for Rivers, M. Fazie Karim and John F. Kennedy,
HY Aug. 90, p978-996.

HY Aug. 90, py8-996. Modeling Desiccating Behavior of Mine Tailings, Gareth E. Swarbrick and Robin Fell, GT Apr. 92, p540-557. Preferred Orientation of Pore Structure in Cement-Grouted Sand, Maan Helal and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p526-540.

Resistance in Flat-Bed Sediment-Laden Flows, D. A. Lyn, HY Jan. 91, p94-114.

River Bed Degradation Due to Abrupt Outfall Lowering, C. W. Lenau and A. T. Hjelmfelt, Jr., HY June 92, p918-933.

p916-933. ock Creek—Cresta Sediment Management Plan, Larry L. Harrison, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p102-107. Rock Creek-

Routing Debris Flows with Particle Segregation, Tamotsu Takahashi, Hajime Nakagawa, Tatsuo Harada and Yousuke Yamashiki, HY Nov. 92, p1490-1507.

Scheduling Maintenance Dredging on Single Reach with Uncertainty, Jay R. Lund, WW Mar./Apr. 90, p211-

Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, Yen-hai Chu and Gil-bert K. Nersesian, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582.

Sediment and Aquatic Habitat in River Systems, ASCE Task Committee on Sediment Transport and Aquatic Habitats, Sedimentation Committee, HY May 92, p669-687.

Status of Scour Instrumentation Development, Roy Trent and Ian Friedland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1088-1093.

Turbulence Characteristics of Sediment-Laden Flows in Open Channels, D. A. Lyn, HY July 92, p971-988.

Type II Sedimentation: Removal Efficiency from Col-umn-Settling Tests, Ravindra M. Srivastava, EE May/ June 92, p438-441.

Ultrafine Cement Tests and Dam Test Grouting, William J. Clarke, Millard D. Boyd and Maan Helal, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p526-638.

Verification Techniques Used in Modeling Charleston Harbor, South Carolina, Samuel B. Heltzel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p257-262.

Wave Interaction with Fluid Mud in Rectangular Trench, Francis C. K. Ting, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p75-

### dimentation tanks

Density Currents and Shear-Induced Flocculation in Sedimentation Tanks, D. A. Lyn, A. I. Stamou and W. Rodi, HY June 92, p849-867.

Improvement of Flow in Final Settling Tanks, Ulrich Bretscher, Peter Krebs and Willi H. Hager, EE May/ June 92, p307-321.

Influences of Density on Circular Clarifiers with Baffles, Siping Zhou, J. A. McCorquodale and Z. Vitasovic, EE Nov./Dec. 92, p829-847.

Modeling of Rectangular Settling Tanks, Siping Zhou and John A. McCorquodale, HY Oct. 92, p1391-1405.

Scepage

Ambient Temperature Effect in Concrete Dam Foundation Seepage, E. C. Kalkani, GT Jan. 92, pl-11.

Analytical Solution of Steady Seepage into Double-Walled Cofferdams, Sunirmal Banerjee and Angel Mu-leshkov, EM Mar. 92, p525-539.

Application of Centrifuge Modeling Technique to Slopes and Embankments, Dobroslav Znidarcic, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p521-537

Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p272-290.

Centrifugal Modeling of Drains for Slope Stabilization, Gregory S. Resnick and Dobroslav Znidarčić, GT Nov. 90, p1607-1624.

Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dams-James L. Sherard Contribu-tions, Sukhanander Singh, ed., 1992), p533-554.

Deep Tangent Piles for Rebid Beaver Dam, CE July 92, p29.

Design of Landfill Drainage Systems, Bruce M. McEnroe, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p208-213.

ed., 1992), p.208-213.
Field Measurements of Tracer Gas Transport Induced by Barometric Pumping, R. H. Nilson, W. B. McKinnis, P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.710-716.

Filters for Silts and Clays (Paper introduced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992),

p384-402.

Free Boundary, Fluid Flow, and Seepage Forces in Excavations, Ronaldo I. Borja, GT Jan. 92, p125-146.

Grouting for Hazardous Waste Site Remediation at Necco Park, Nisgara Falls, New York, K. D. Weaver, R. M. Coad and K. R. McIntosh, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Höltz, ed. and Ilan Juran, ed., 1992), p1322-1343.

Importance of ET on Colorado River Water Quality, Kenneth A. Pitney, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p171-176.

Influence of Seepase on Stability of Sandy Slone, C. van Influence of Seepase on Stability of Sandy Slone.

man, ed., 1992), p171-176.
Influence of Seepage on Stability of Sandy Slope, C. van Rhee and A. Bezuijen, GT Aug. 92, p1236-1240.
Leakage Mechanism Through Double Liner Systems, Abdul R. Mulla Saleh, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p192-200.

Long Term Behavior of Urban Fill Embankments, J. David Rogers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1258-1273.

Mathematical Model for Piping, M. A. Koenders and J. B. Sellmeijer, GT June 92, p943-946.

Moisture and Suction in Sanitary Landfills in Semiarid Areas, G. E. Blight, J. M. Ball and J. J. Blight, EE Nov./Dec. 92, p865-877.

Movement of Slopes During Rapid and Slow Drawdown, Ronaldo I. Borja and Sunil S. Kishnani, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404-

Performance of an Embankment Dam With Partial Cut-off, Pascual H. Perazzo and Tauseef I. Choudry, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1022-1032.

Predicting Effects of Subsidence on Landfill Caps, A. W. Bredariol, J. Larralde, J. P. Martin and C. A. Fiori, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p360-364.

Predicting Fate and Effects of Hydrocarbons in the Oceans, Richard A. Geyer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p356-369.

Reflection and Transmission of Water Wave by Porous Breakwater, L. H. Huang and H. I. Chao, WW Sept./ Oct. 92, p437-452.

Seepage Effects on Bridge Pier Scour, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p919-924.

penge Influence on Stability of Bridge Abutments, D. J. Hagerty and A. C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

1972, p900-97.
Seepage Optimization for Trapezoidal Channel, A. R. Kacimov, IR July/Aug. 92, p520-526.
Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1050-1065.

Seepage control in Integration of Chemical and Cement Grouting Techniques for Controlling Mine Water Inflows through Fractured Ground, Trevor G. Carter, Stephen H. E. Phillips and Patrick C. Cochrane, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-

Jet Grouting in Contaminated Soils, Herff N. Gazaway and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p206-214.

Lessons Learned from Elk Creek Dam, Dennis R. Hopman, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p162-180.

Progress and Developments in Dam Rehabilitation by Grouting, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p601-613.

Proposed Sealing Field Tests for a Potential High-Level Radioactive Waste Repository in Unsaturated Tuff, Joseph A. Fernandez, John B. Case and Joseph Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Thomatitee, 1992), p2290-2297.

Seepage Control in Kaolinite Clay with Simulated Cracks, C. Vipulanandan and M. Leung, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1054-1066.

1066

Tunnel Seepage Control by the Interior Grouting Method, Bruce A. La Penta, Reuben H. Karol and Charles H. Arnold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p436-448.

egmented elements
evelopment of Detached Breakwater Design Criteria
Using a Shoreline Response Model, Julie Dean Rosati,
Mark B. Gravens and Monica A. Chasten, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),
p814-829.

Instrumenting the 'Y', Carin L. Roberts, John E. Breen and Patrick M. Bachman, CE Nov. 92, p48-51. Optimal Linear Segmented Structures with Variable Seg-ment Boundaries, C. J. Goh and C. M. Wang, EM Dec.

92, p2376-2383.

An Overview of Segmented Offshore/Headland Breakwa-ter Projects Constructed by the Buffalo District, Thom-as Bender, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p170-188.

ter Projects Constructed by the Bultalo District, I homas Bender, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), pl 70-188.

Seismic analysis

Dynamics of Buildings with V-Shaped Plan, Sudhir K. Jain and Utpal K. Mandal, EM June 92, p1093-1112.

Earthquake Hazard Investigative Procedures for Central United States Waterworks, James R. Blackiock, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), pl-15.

Evaluation of Seismic Vulnerability of Highway Bridges in the Eastern United States, J. B. Mander, F. D. Panthaki and M. T. Chaudhary, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86.

Geotechnical Investigation Strategies for Lunar Base, Dan A. Brown and Glenn Rix, AS Apr. 92, p199-213.

A GIS-Based Regional Risk Approach for Bridges Subjected to Earthquakes, Seong H. Kim, Michael P. Gaux, George Lee and K. C. Chang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p460-467.

Measured to the Max, Robert Nigbor, Ahmet Cakmak and Robert Mark, CE Nov. 92, p44-47.

New NDT Device for Comprehensive Pavement Maintenance (Theoretical Aspects), S. Nazarian and M. Baker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p948-951.

Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, Loai El-Gazarity, Barry Goodno and James Craig. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p986-904.

Probing the Golden Gate, Mark A. Ketchum and Al Hedermon, CE June 91, p42-45.

Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p38-40.

Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Huu and Apostolos Faffits, ST Sept. 92, p2459-2474.

Si sept. 92, p.2-95-26-4.
Seismic Anlaysis and Design of Lined Waste Fills: Current Practice, Raymond B. Seed and Rudolph Bonaparte, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1521-1545.

Seismic Pile-Group—Structure Interaction, G. Gazetas, K. Fan, T. Tazoh, K. Shimizu, M. Kavvadas and N. Makris, (Piles Under Dynamic Loads. Shamsher Prakash, ed., 1992), p56-93.

Stochastic Critical Excitations, Mukund Srinivasan, Ross Corotis and Bruce Ellingwood, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391.

Utilization of Economical Slopes for Jordanelle Dam, John A. Wilson, William O. Engemoen, Francis G. McLean and Perry J. Hensley, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653–686.

Seismic design

AASHTO Seismic Isolation Design Requirements for Highway Bridges, Ronald L. Mayes, Ian G. Buckle, Trevor E. Kelly and Lindsay R. Jones, ST Jan. 92, p284-304.

Actively Controlled P-F Based Sliding Structures, Sohail M. Qureshi, Kiyoshi Uno and Hajime Tsutsumi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p324-327.

Baianced Seismic Design of Anchored Retaining Walls, G. Neelakantan, M. Budhu and R. Richards, Jr., GT June 92, p873-888.

Behavior of Externally Confined Concrete Columns, M. W. Li, H. Saadatmanesh and M. R. Ehsani, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p677-690.

Computed Versus Observed Seismic Response and Damage of Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1804-1821.

Cyclic Behavior of Extended End-Plate Joints, Ahmed Ghobarah, Robert M. Korol and Ashraf Osman, ST May 92, p1333-1353. Design of Tied-Back Walls for Seismic Loading, Thomas J. Siller and Matthew O. Dolly, GT Nov. 92, p1804-

1821.

Development of a Limit-State Seismic Code for Bridges, Ian G. Buckle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p164-167.

Development of Design Spectra for Actively Controlled Wall-Frame Buildings, Y. P. Wang, A. M. Reinhorn and T. T. Soong, EM June 92, p1201-1220.

Ductility and Detailing Requirements of Bearing Wall Buildings, John W. Wallace and Jack P. Moehle, ST June 92, p1625-1644.

Dynamic Analysis of Sliding Seismic Isolators, Navin-chandra Amin, Anoop Mokha, Stanley Low and Victor Zayas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p320-323.

Effectiveness of Seismic Strengthening Techniques for Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, p1884-1902.

N. Fardis, ST July 92, p1884-1902.
Exact Nonstationary Response of a Sliding Rigid Structure to a Modulated White Noise Base Excitation, Mare P. Mignolet and Guangwuu W. Fana, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p408-411.
Hysteretic Behavior of Anchorage Slip in R/C Members, Murat Saatcioglu, Jaber M. Alsiwat and Guney Ozcebe, ST Sept. 92, p2439-2458.
Locally Buckled Plastic Hinge Behavior Under Monotonic and Cyclic Loading Condition, Eun-Taik Lee and G. C. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.
New Seismic Code Has Widespread Implications. CE

New Seismic Code Has Widespread Implications, CE

Nov. 92, p22.

Normalizing Inelastic Seismic Response of Structures Having Eccentricities in Plan, Michel Bruneau and Stephen A. Mahin, ST Dec. 90, p3358-3379.

Perspectives on Seismic Design Basis Deterministic and Probabilistic Approaches, Robin K. McGuire, Robert T. Sewell, Gabriel R. Toro and J. Carl Stepp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1137-1141.

Proposed Seismic Design Method for Piers and Wharves, Robert E. Harn and Bankim C. Mallick, (Ports '92, David Torseth, ed., 1992), p403-417. Retrofitting a Landmark, David L. Houghton, CE Feb. 92, p55-57. Roof-Snow Load for Seismic-Design Calculations, Michael J. O'Rourke and Robert S. Speck, Jr., ST Sept. 92, p2338-2350. Seattle Plays It Safe, Walley E. Account.

92, p.238-2350.
Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p.38-40.
Seismic Anlaysis and Design of Lined Waste Fills: Current Practice, Raymond B. Seed and Rudolph Bonaparte, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.1521-1545.
Seismic Behavior and Shear Strength of Framed Joint Using Steel-Fiber Reinforced Concrete, Jiuru Tang, Chaobin Hu, Kaijian Yang and Yongcheng Yan, ST Feb. 92, p.341-338.
Seismic Design of Viscoclastic Dampers for Structural

Feb. 94, p.941-338. Seismic Design of Viscoelastic Dampers for Structural Applications, Ri-Hui Zhang and T. T. Soong, ST May 92, p1375-1392.

ic Fuse Does Double Duty in Arizona, CE Mar. 92,

p88. Seismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, Klaus H. Jacob, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p58-71. Seismic Mitigation of the Memphis Water System, Kevin M. Poe, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992),

p16-28

ismic Panel Zone Design Effect on Elastic Story Drift in Steel Frames, Keh-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

ST Dec. 90, p3285-3301.

Seismic Passive Resistance of Tied-Back Walls, R. Richards, Jr. and D. G. Elms, GT July 92, p996-1011.

Seismic Repair at Seventh Street Marine Terminal, John A. Egan, Robert F. Hayden, Larry L. Scheibel, Mahmut Otus and Gerald M. Serveni: Urouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p867-878.

Seismic Response of Multianchored Retaining Walls, Thomas J. Siller and Dorothy D. Frawley, GT Nov. 92, p1787-1803.

ismically Safe, Spectator-Friendly, Charles H. Thorn-ton, Thomas Z. Scarangello and Chris Christoforou, CE Feb. 92, p52-54.

CE Feb. 92, p52-54.

Steamer Zone Formation and Slope Stability Analysis, Scott E. Shewbridge and Nicholas Sitar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370.

Standardizing Seismic Rehab, CE Sept. 92, p11.

Structural Seismic Damper, Manuel Aguirre and A. Roberto Sánchez, ST May 92, p1198-1171.

Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.

The Use of Vibro Systems in Seismic Design, Roberto A. López and Robert F. Hayden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1433-1445.

sic effects

Seismic effects Applications of Viscoelastic Damper to Jointed Structures for Seismic Mitigation, C. S. Tsai and H. H. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p685-688. Impact on Water Supply of a Seismically Damaged Water Delivery System, M. Shinozuka, H. Hwang and M. Murata, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992),

and Eastern U.S., Donald B. Ballantyne, ed., 1992), p43-57.
Implementing Uncertainty Treatment in Al Development Environment, Fabio Casciati and Debbie Liu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p17-20.
Regional Evaluation of Transportation Lifelines in New York State with the Aid of GIS Technology, Massanobu Shinozuka, Michael P. Gaus, Seong H. Kim and George C. Lee, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p102-109.
Seismic Hazard Analysis for Crude Oil Pipelines in the

issmic Hazard Analysis for Crude Oil Pipelines in the New Madrid Seismic Zone, Michael J. O'Rourke, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p125-139.

Seismic-Energy Dissipation in MDOF Structures, Pierre Léger and Serge Dussault, ST May 92, p.1251-1269.
Simple Rigid Plastic Model for Seismic Tilting of Rigid Walls, Raj Siddharthan, Samia Ara and Gary M. Nor-ris, ST Feb. 92, p469-487.
Structural Control Under Schotastic Seismic Loads, J. N. Yang, Z. Li and S. Vongchavalikul, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), p828-831.

ed., 1992), p828-831. Transportation Lifeline Losses in Large Eastern Earth-quakes, C. Rojahn, C. Scawthorn and M. Khater, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101.

Dynamic Interface Shear Strength Properties of Geomembranes and Geotextiles, M. K. Yegian and A. M. Lahlaf, GT May 92, p760-779.

M. Lahlaf, GT May 92, p760-779.
 Earthquake Countermeasures for Lifelines in the Central and Eastern United States, T. D. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p168-191.
 Earthquake Hazard Investigative Procedures for Central United States Waterworks, James R. Blacklock, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p1-15.
 Earthquake-Induced Permanent Deformations: Probabilistic Approach, M. K. Yegian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50.
 Final Design and Construction of Gibraltar Dam

G. Ghahraman, GT Jan. 91, p35-50.
Final Design and Construction of Gibraltar Dam Strengthening, Noel C. Wong, Theodore B. Feldsher, Robert S. Wright and David H. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p440-458.
Fuzzy Measures in the Knowledge Based Diagnosis of Seismic Vulnerability of Masonry Buildings, Alberto Bernardini, Roberto Gori and Claudio Modena, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28.

Geographic Information Systems in Earthquake Hazard Analyses, J. David Frost, Jean-Lou A. Chameau and Ronaldo Luna, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p452-459.

Goodno, ed. and Jeff R. wright, ed., 1992,5, ps22-339.

GIS-Based Regional Risk Approach for Bridges Subjected to Earthquakes, Seong H. Kim, Michael P. Gaus, George Lee and K. C. Chang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), ps60-467.

Rodding Engl Rupture Hazard for the Proposed Reposit

1992), p460-467.

Modeling Fault Rupture Hazard for the Proposed Repository at Yucca Mountain, Nevada, K. J. Coppersmith and R. R. Youngs, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1142-1150.

Medde Geologic and Seismic Rulemaking for HLW Repositories, Jay L. Smith, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p685-690.

Proclosure, Sairmie, Harards, and Their Impact on Site.

Preclosure Seismic Hazards and Their Impact on Site Suitability of Yucca Mountain, Nevada, J. Duane Gib-son, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1151-1158.

mittee, 1992), p1131-1138.

Regional Evaluation of Transportation Lifelines in New York State with the Aid of GIS Technology, Masanobu Shinozuka, Michael P. Gaus, Seong H. Kim and George C. Lee, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p102-109.

Seismic Hazard Along a Central U.S. Oil Pipeline, Howard H. M. Hwang, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p110-124.

ed., 1992), p110-124.
Seismic Hazard Analysis for Crude Oil Pipelines in the New Madrid Seismic Zone, Michael J. O'Rourke, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p125-139.
Seismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, Klaus H. Jacob, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p58-71.
Transportation Lifeline Losses in Large Eastern Earth-

Transportation Lifeline Losses in Large Eastern Earth-quakes, C. Rojahn, C. Scawthorn and M. Khater, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101.

Seismic Investigations
Soil Nailing Shown Seismically Stable, CE Dec. 92, p24.
A Wax-Coupled Borehole Seismic Detector for High-Resolution Measurements, Thomas E. Owen and Jorge O. Parra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p535-538.

Seismic properties
Caltrans/Private Sector Partner Pile Load Test, CE Oct.
92, p15,18.

Seismic response
Analysis of Behavior of Earth Dam Using Strong-Motion
Earthquake Records, Mourad Zeghal and Ahmed M.
Abdel-Ghaffar, GT Feb. 92, p266-277.

Analytical Studies on the Seismic Response of Lead Rubber Base Isolated Bridges, Emmanuel Maragakis, Mehdi Saiidi and Eui-Seng Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

1992), 657-70.

Batter Piles and the Seismic Performance of Pile-Supported Wharves, W. H. Roth, H. Fong and C. de Rubertis, (Ports '92, David Torseth, ed., 1992), p336-349.

Computed Versus Observed Seismic Response and Dam-age of Masonry Buildings, Fillitsa V. Karantoni and Michael N. Fardis, ST July 92, pl 804-1821. Design of Tied-Back Walls for Seismic Loading, Thomas J. Siller and Matthew O. Dolly, GT Nov. 92, p1804-

1821.

1961.

Dynamic Analysis of Sliding Seismic Isolators, Navinchandra Amin, Anoop Mokha, Stanley Low and Victor
Zayas, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992., p320-323.

Dynamic Response of Flexibly Supported Liquid-Storage
Tanks, Anestis S. Veletsos, Yu Tang and H. T. Tang,
ST Jan. 92, p264-283.

Effect of Ambient Tamparature on Vicadatical

Effect of Ambient Temperature on Viscoelastically Damped Structure, K. C. Chang, T. T. Soong, S.-T. Oh and M. L. Lai, ST July 92, p1955-1973.

and M. L. Lai, ST July 92, p1935-1973.

Effect of Contraction Joints on Earthquake Response of Arch Dam, Gregory L. Fenves, Soheil Mojtahedi and Richard B. Reimer, ST Apr. 92, p1039-1055.

Embankment Dams—James L. Sherard Contributions, Geotechnical Special Publication No. 32 (Sherard Memorial Volume), Sukhanander Singh, ed., 1992, 0-87262-897-3, 590pp.

Equivalent Linearization for Seismic Responses. I: Formulation and Error Analysis, Young J. Park, EM Nov. 92, p.207-2726.

92, p2207-2226.

92, p2207-2226.

Evaluation of Seismic Soil Response Using Stochastic Linearization, Jeen-Shang Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p356-359.

Evaluation of Seismic Vulnerability of Highway Bridges in the Eastern United States, J. B. Mander, F. D. Panthaki and M. T. Chaudhary, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86.

Evaluation of Soil Properties for Seismic Stability Analyses of Slopes, Geoffrey R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p116-142.

Finite Element Model for Seismic RC Coupled Walls Having Slender Coupling Beams, Omar Chaallal, ST Oct. 92, p2936-2943.

F-K Spectra From a Haskell-Type Source in a Multiple-

F-K Spectra From a Haskell-Type Source in a Multiple-Layered Half-Space, George Deodatis, Andronikos Theoharis and Masanobu Shinozuka, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p272-275.

K. Lin, ed., 1992), p212-215.
Improved Time-History Analysis for Structural Dynamics Calculations, C. -C. Chen and A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p449-452.
Influence of ADAS Element Parameters on Building Seismic Response, Chuan Xia and Robert D. Hanson, ST July 92, p1903-1918.

La Villita Dam Response During Five Earthquakes In-cluding Permanent Deformation, Ahmed-Waeil M. El-gamal, Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, p1443-1462.

Lessons Not Learned from 1989 Loma Prieta Earth-quake, Ghassan Tarakji, El Apr. 92, pl 32-138. Load Shortening in Plastic Buckling of Cylinders, Marwan El-Bkaily and Ralf Peek, EM Sept. 92, pl 892-

Normalizing Inelastic Seismic Response of Structures Having Eccentricities in Plan, Michel Bruneau and Stephen A. Mahin, ST Dec. 90, p3358-3379.

Optimal Allocation of Resources in Repair and Mainte-nance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4.

Out-of-Plane Seismic Response of Reinforced Masonry Walls, Martin R. Button and Ronald L. Mayes, ST Sept. 92, p2495-2513.

Recorded Seismic Response of Pacific Park Plaza. II: System Identification, E. Şafak and M. Çelebi, ST June 92, p1566-1589.

p1566-1589.

Response of Suspension and Deck Arch Bridges to Spatially Varying Ground Motion, Ronald S. Harichandran, Ahmad Hawwari and Basheer N. Sweidan, (Probabilistic Mechanics and Structural and Geolechnical Reliability, Y. K. Lin, ed., 1992), p264-267.

Seismic Performance of Fixed-Base and Base-Isolated Steel Frames, A. N. Lin and H. W. Shenton, III., EM May 92, p921-941.

Seismic Piel-Group—Structure Interaction, G. Gazetas, K. Fan, T. Tazoh, K. Shimizu, M. Kavvadas and N. Makris, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93.

Seismic Rehabilitation of Seattle's Pier 69, David Pierce and Ronald E. Martinson, (Ports '92, David Torseth, ed., 1992), p418-428.

Seismic Repair at Seventh Street Marine Terminal, John

ed., 1992), p418-428.
Seismic Repair at Seventh Street Marine Terminal, John A. Egan, Robert F. Hayden, Larry L. Scheibel, Mahmut Otus and Gerald M. Serventi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p867-878.
Seismic Response of Landfill Slopes, D. G. Anderson, B. Hushmand and G. R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p973-989.
Seismic Response of Pacific Park Plaza. I: Data and Preliminary Analysis, M. Celebi and E. Safak, ST June 92, p1547-1565.
Seismic Response of R/C Frames with Irregular Profiler

Seismic Response of R/C Frames with Irregular Profiles, Sharon L. Wood, ST Feb. 92, p545-566.
Seismic Response Variability of Soil Sites, C. H. Yeh and M. S. Rahman, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), 2302-305. p392-395

p392-395.
Seismic Stability and Permanent Deformation Analyses: the Last Twenty Five Years, W. F. Marcuson, III., M. E. Hynes and A. G. Franklin, (Stability and Performance of Slopes and Embankments III. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p532-592.
Sensitivity of Lifeline Response to Models for the Spatial Incoherence of the Seismic Ground Motions, Aspasia Zerva, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p560-563.
Spatial Variability Effects on the Seismic Response of Models of Bridges, Aspasia Zerva, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p172-175.
Stitch Spacing and End Fixity in Seismic-Resistant Boxed

Stitch Spacing and End Fixity in Seismic-Resistant Boxed Angle Braces, Farhang Aslani and Subhash C. Goel, ST Oct. 92, p2872-2889.

Stochastic Response of a Caster-Mounted System, Michael A. Moser and Wilfred D. Iwan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p316-319.

Structural Reliability of Seismic Isolation System, Kazuta Hirata, Kenji Shirahama and Takahiro Somaki, (Probalitistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p57-60.

Surface Motion Due to Stochastic Plane Sources in a Layered Medium, Y. Yong and J. Yu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p184-187.

[There-Dimensional Science Analysis of La Villia Dam.

Three-Dimensional Seismic Analysis of La Villita Dam, A-W. Elgamal, GT Dec. 92, p1937-1958. Wave Propagation in Solids, A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

nic stability

Full Scale Application of Active Bracing Systems, M. A. Riley, A. M. Reinhorn and T. T. Soong, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p816-819.

Investigation of Mackay Dam Following the 1983 Borah Peak Earthquake, Leslie F. Harder, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p956-972.

Post-Earthquake Slope Stability of Two Dams with Liq-uefied Gravel Foundations, D. W. Sykora, J. P. Koes-ter, R. E. Wahl and M. E. Hynes, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005.

Seismic Assessment of Tailings Dams, Thomas G. Har-per, Harvey N. McLeod and Michael P. Davies, CE Dec. 92, p64-66.

Seismic Retrofit Analysis of a Homogeneous Earthfill Dam, Suji Somasundaram, Kris S. Khilnani and Geof-frey R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p669-684.

Seismic Stability Analysis of Landfill, Max Y. Ma, Albert T. Yeung and An-Bin Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724.

Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p103-1049.

### Seismic studies

Seismic Guidelines Impact Los Angeles Wharf Design, CE June 92, p28.

### mic surveys

High-Resolution Interwell Seismic Experiments in Sedi-mentary Formations, Jorge O. Parra and Brian J. Zook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p519-532.

Seismic Survey Considerations in the Planning and Design of Dredging Projects for Marine Terminal Facilities, Charles J. Natale, Jr., Thaddeus A. Nowak, Jr. and Bruce A. Adams, (Ports '92, David Torseth, ed., 1992), p456-469.

Stochastic Modelling of Strong Ground Motions for the Istanbul, Turkey Area from Seismic Data for the Surrounding Region, Kirsten L. Findell and Ahmet S. Cakmak, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-271.

An Acoustic Impedance Method for Subbottom Material Characterization, Richard G. McGee and Robert F. Ballard, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1030-1035.

Forced Vibration Testing of an Expanded Base Concrete Pile, Alex Sy and David Siu, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p170-186.

High Resolution Seismic Imaging for Characterizing Fractures in Potential Sites for Nuclear Waste Repositories, Ernest Majer, Larry Myer, John Peterson and Jung Mo Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1111-1121.

Teleseismic Tomography of the Yucca Mountain Region: Volcanism and Tectonism, John R. Evans and Moses Smith, III., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1922), p2372-2389.

Differential Motions in Sedimentary Valleys, Apostolos S. Papageorgiou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p400-403.

Seismic Wave Propagation by Finite Differences on the Connection Machine, Jacek Myczkowski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p115-118.

A Wax-Coupled Borshols Seismic Detector for High-Resolution Measurements, Thomas E. Owen and Jorge O. Parra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p535-538.

Site-Dependence of Spatial Coherency, Norman Abra-hamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p260-263.

### Selection

Appropriate Use of Deep-Bed Filtration Models, C. S. P. Ojha and N. J. D. Graham, EE Nov./Dec. 92, p964-980.

Concrete Surface Treatments—A Selection Guide, P. James Bruner, Jr., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482.

An Example of Rubble Mound Construction Procedures, A. W. Sam Smith and L. Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), pl 38-

Expert System for Equipment Selection for Earth-Moving Operations, Serji N. Amirkhanian and Nancy J. Baker, CO June 92, p318-331.

FRP-Reinforced Wood as Structural Material, Nikolaos Plevris and Thanasis C. Triantafillou, MT Aug. 92, p300-317.

Method for Preevaluation and Selection of Road Projects in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-178.

Performance-Based Evaluation of Lunar Base Construc-tion Equipment and Methods, Walter W. Boles, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p332-340.

Risk Analysis Approach to Selection of Contractor Evaluation Method, Edward J. Jaselskis and Jeffrey S. Russell, CO Dec. 92, p814-821.

Selecting Financial Management Software, Sharon O'Donnell, CC July 92, p14.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, Kevin R. Stank and James W. Knox, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and Wil-liam F. Baird, ed., 1992), p95-114.

Filot-scale Anaerobic Biological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapil Sabbarwal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450.

Removing Selenium(IV) and Arsenic(V) Oxyanions with Tailored Chelating Polymers, Anuradha Ramana and Arup K. Sengupta, EE Sept./Oct. 92, p755-775.

ASCE Indonesia Group Holds Its First Seminar, CE Oct. 92, p70.

Beyond Push-Button GPS, Alfred Leick, CE June 92, p75-76.

## Sensitivity analysis

BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906-911.

Climate Change and Water Management Flexibility, Lin-da L. Nash, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-522.

Finite Element Dynamic Reliability Analysis with Con-densation, Sankaran Mahadevan and Sandeep Mehta, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p332-335.

In-Channel Sediment Basins: An Alternative to Dam-Style Debris Basins. Wendy S. Gist, Scott E. Stone-treet and Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1000-1005.

Integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, B. A. Miller, V. Alavian, M. D. Bender, D. J. Benton, C. Ostrowski, Jr., J. A. Parsly and M. C. Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p563-568.

Model Sensitivity Analysis in Near-Field Performance Assessment, N. C. Garisto and D. M. LeNeveu, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2284-2289.

Planning Centralized Materials Recovery Facilities, Rende A. Lawer and Jay R. Lund, (Environmental En-gineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p537-542.

Postbuckling Response Simulations of Laminated Aniso-tropic Panels, Ahmed K. Noor, James H. Starnes, Jr. and W. Allen Waters, Jr., AS July 92, p347-368.

Prediction and Sensitivity of Recharges Due to Rainfall, Sampath K. R. Danda and Lakshmi N. Reddi, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402.

Pre-Test Selection of Static Force and Displacement Measurement Locations for Damage Assessment, Masoud Sanayei, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed.,

1992), p567-570.

Remediation Site Prioritization by the Risk Ranking and Filtering Method, James H. Lambert, Con Way Ling and Yacov Y. Haimes, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p311-321.

ensitivity Analysis of Thin-Walled I-Beams Resting on Elastic Foundation, B. B. Budkowska and C. Szymc-zak, EM June 92, p1239-1248.

Sensitivity of HMR-51/52PMP-Based Probable Maximum Flood (PMF) to Basin Lag and Land Use, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p895-899.

Sensitivity of Lifeline Response to Models for the Spatial Incoherence of the Seismic Ground Motions, Aspasia Zerva, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p560-561

Sensitivity of Non-Point Source Pollution Controls to Land Use, Oner Yucel and David W. Blaha, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p358-363.

Thermomechanical Buckling of Multilayered Composite Plates, Ahmed K. Noor and Jeanne M. Peters, EM Feb. 92, p351-366.

Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, Paul G. Ka-plan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1643-1646.

The Application of Ultrasonic Surface Detectors to Hop-per Dredge Production Monitoring, Stephen H. Scott and Angela Freeman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings

Concrete Beam Testing with Optical Fiber Sensors, D. Huston, P. Fuhr, P. Kajenski and D. Snyder, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p60-69.

Histogram-Based Approach for Automated Pavement-Crack Sensing, K. R. Kirschke and S. A. Velinsky, TE Sept./Oct. 92, p700-710.

Installation and Monitoring of Thermal Conductivity Suction Sensors in a Fine-Grained Subgrade Soil Subjected to Seasonal Frost, Walaa E. I. Khogali, Kenneth O. Anderson, Julian K. Gan and Delwyn G. Fredlund, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p153-167.

Measuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, David W. Jensen and John M. Cory, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1273-1285.

NASA's Entre Pierre Co.

1992), p1273-1285.

NASA's Future Plans for Space Astronomy and Astrophysics, Michael S. Kaplan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1789-1797.

Real-Time Condition Monitoring of Concrete Structures by Embedded Optical Fibers, Farhad Ansari, (Nonde-structive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p49-59. ensor Can Get the Lead Out, CE Oct. 92, p8.

Smart Structures, Rita Robison, CE Nov. 92, p66-68.

Smart Structures, Rita Robison, CE Nov. 92, pb6-68.
A System for Measuring Moisture Transients in Clay-Based Barrier Materials, A. W. L. Wan, B. H. Kjartanson, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1122-1128.

Testing Photoelectric Sensor System to Classify Vehicles, J. L. Gattis and Clyde E. Lee, TE May/June 92, p457-471.

471.
Use of Short-Period Microtremors for V<sub>2</sub> Profiling, Kohji Tokimatsu, Kenichiro Shinzawa and Shinichi Kuwayama, GT Oct. 92, p1544-1558.
A Wax-Coupled Borehole Seismic Detector for High-Resolution Measurements, Thomas E. Owen and Jorge O. Parra, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p535-538.

and John M. Niedzwecki, ed., 1992, p535-538.
The Wide-Angle Optoelectronic Stereo Scanner WAOSS for the Soviet Mars 94/96 Missions, Rainer Sandau and Dieter Certel, Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2241-2251.
X-Ray and Visible Light Transmission as Two-Dimensional, Full-Field Moisture-Sensing Techniques. A Preliminary Comparison, V. C. Tidwell and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1099-1110.

Separation

Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 139-1149.

Isotopic Separation of 3He4He From Solar Wind Gases Evolved from the Lunar Regolith, William R. Wilkes and Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.

Partitioning of Aqueous High-Level Wastes; State-of-the-

State, ed. and Kussen J. Miller, ed., 1992), p547-554. Partitioning of Aqueous High-Level Wastes: State-of-the-Art Technology, Wallace W. Schulz, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1718-1723.

Separation of Skewness: Reality or Regional Artifact? Fahim Ashkar, Bernard Bobée and Jacques Bernier, HY Mar. 92, p460-475.

Separation techniques
Hanford Defense Waste Separation Options, B. A. Wolfe,
W. B. Barton and D. G. Sutherland, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
arXiv:1201.1736 p1701-1710.

Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, Zhihuai Xue, Zhongling Hua, Qi Li and Naiyi Yao, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p376-381.

# Septic tanks

Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, Paul A. Dombrowski and James C. O'Shaughnessy, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p36-41.

## sequencing batch reactor

Leachate Treatment Helps Landfill Expand, CE Apr. 92,

Service life

Safety and Service Life of Equipment Designed for Cold Climate Operation, V. P. Larionov, CR Sept. 92,

Shuler, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p186-205.

Service loads

Modeling Stiffness Degradation in Filamentary Composite Materials, Robert M. Hackett and Kerry T. Slattery, MT May 92, p196-211.

MT May 92 Dehouse of Concrete Members Prestressed

Service Load Behavior of Concrete Members Prestressed with Unbonded Tendons, M. H. Harajli and M. Y. Kanj, ST Sept. 92, p2569-2589.

erviceability

Bracing Requirements of Plane Frames, Shyi-Lin Lee and P. K. Basu, ST June 92, p1527-1546.

Limit-State Interactions in Reliability-Based Design for Wood Structures, David Rosowsky and Bruce Elling-wood, ST Mar. 92, p813-827.

wood, S1 MBI. 72, p813-85 of Wood Beams with Creep, David V. Rosowsky, Kenneth J. Fridley and Timothy A. Philpot, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90.
Time-Dependent Analysis of Composite Steel-Concrete Sections, R. Ian Gilbert, ST Nov. 89, p2687-2705.

Levels of Service Applied to Urban Streams, H. Rooney Malcom and Cynthia C. Lancaster, WR July/Aug. 91, p482-497.

ttlement analysis

Settlement snasysus
Building Protection from Tunneling in Downtown Los
Angeles, Loring A. Wyllie, Jr. and John A. Dal Pino,
(Excavation and Support for the Urban Infrastructure,
T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p107-118.

Building Response to Excavation-Induced Settlement, Marco D. Boscardin and Edward J. Cording, GT Jan. 89, p1-21.

Deformation of Fill Slopes Caused by Wetting, Iraj Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257.

The Design of a Reclamation Scheme by Preloading, S. Ossama Mazen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1019-1030.

Elastic-Plastic Analysis of Footings on Anisotropic Soils, A. Nanda and T. Kuppusamy, GT Mar. 92, p428-448. Hydrocompression Settlement of Deep Fills, Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, p1536-1548.

G1 Oct. 90, p1390-1348.

LASSAP, Stress and Settlement Analysis and Design Program, Clarence Jiang, K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry I. Goodno, ed. and Jeff R. Wright, ed., 1992), p426-433.

Long Term Behavior of Urban Fill Embankments, J. David Rogers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1258-1273.

Boulanger, ed., 1992), pl 238-1273.

One-Dimensional Settlement Analysis for Embankments, Peter A. Stauffer, Richard R. Davidson, Richard S. Ladd and David B. Paul, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403.

Settlement and Moisture Movement in Collapsible Soils, Mostafa El-Ehwany and Sandra L. Houston, GT Oct. 90, p1521-1535.

90, p1521-1535.
Settlement, Structural Failure, and In-place Repair of Above Ground Storage Tanks, Richard M. Berry and Robert P. Buhrow, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p240-251.
Settlements of Shallow Foundations on Cohesionless Soils, Basil P. Papadopoulos, GT Mar. 92, p377-393.
Shallow Soil Mixing—A Case History, David Broomhead and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p564-576.

Small Parshall Flume Rating Correction, Steven R. Abt, Christopher Cook, Kenneth J. Staker and Derek D. Johns, HY May 92, p798-803. Transport of Low-Level Radioactive Soil at Deep-Ocean Disposal Site, James S. Bonner, Carlton D. Hunt, John F. Paul and Victor J. Bierman, Jr., EE Jan/Feb. 92, Page 11 Section 1997.

Type II Sedimentation: Removal Efficiency from Col-umn-Settling Tests, Ravindra M. Srivastava, EE May/ June 92, p438-441.

Settlement control
Bored Tunneling for Singapore Metro, T. W. Hulme and
A. J. Burchell, CO June 92, p363-384.

Construction and Performance of Two Large Rockfill Embankments, Gordon M. Matheson and William F. Parent, GT Dec. 89, p1699-1716.

Construction and Performance of Two Large Rockfill Embankments, Gordon M. Matheson and William F. Parent, GT Dec. 89, p1699-1716.

Design and Performance of Two Port Silos on Improved Ground, M. U. Ergun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p842-854.

Design of Floating Stone Columns in Hydraulic Fill, Raymond A. DeStephen, David W. Kozera and Frank J. Swekosky, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p829-841.

Design of the Charter Oak Bridge Embankments, Alec D. Smith, (Stability and Performance of Slopes and Embankments II., Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p721-736.

Inverse Analysis of Geotechnical Parameters on Improved Soft Bangkot Clay, Dennes T. Bergado, Apollo S. Enriquez, Casan L. Sampaco, Marolo C. Alfaro and A. S. Balasubramaniam, GT July 92, p1012-1030.

Limited Compaction Grouting for Retaining Wall Repairs, Michael J. Byle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p288-300.

Loss of Ground During CFA Pile Installation in Inner Urban Areas, Jacek K. Leznicki, Melvin I. Esrig and Robert G. Gaibrois, GT June 92, p948-950.

Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.

A New Technique for Quality Control O Dynamic Compaction, Chaim J. Poran, King-Sen Heh and Jorge A. Rodriguez, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p915-926.

Pipeline Response to Pile Driving and Adjacent Excavation, P. W. Linehan, A. Longinow and C. H. Dowding, GT Feb. 92, p300-316.

Prototschnik. (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p913-44-1355.

Settlement Reduction by Soil Fracture Grouting,

Settlement Reduction by Soil Fracture Grouting, Mario J. Pototschnik, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p398-409.

Site Qualification for Inclinometer Surveyng Using Tittmeters, Howard Egan, Gary R. Holzhausen and Dan Sampson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551.

Settling basins
Citical Evaluation of Thickening Theories, Athanasios
Papanicolaou and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p735-740.

Modeling of Rectangular Settling Tanks, Siping Zhou and John A. McCorquodale, HY Oct. 92, p1391-1405.

Sewage Estimating Urban and Suburban Sewerage Flows with As-sistance of GIS Technology, Paul Kirshen, Daniel Nyule and John Corlins, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p208-212.

Improvement of Flow in Final Settling Tanks, Ulrich Bretscher, Peter Krebs and Willi H. Hager, EE May/ June 92, p307-321.

Perils of Point Loma, John Prendergast, CE Nov. 92,

Sewage disposal Balancing Hydraulic Requirements for Storage and Di-version in Planning Subsurface Facilities for the Con-trol of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.

F. Pierce Linaweaver, ed., 1992), p86-91.

Sewage sludge
Bioleaching of Metals from Sewage Sludge by SulfurOxidizing Bacteria, J. F. Blais, R. D. Tyagi and J. C.
Auclair, EE Sept./Oct. 92, p690-707.

Nassau County Sludge Management Multi-Phased Environmental Assessment, Steve Fangmann, John Pascucci, Thomas Immerso, Carl Koch and Darlene McKinney, (Environmental Engineering: Saving a Threatened
Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p269-274.

Waste Glass and Sewage Sludge Frit Use in Asphalt Pavements, Warren H. Chesner, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p296307.

Strage treatment
Municipal Wastewater for Power Plant Cooling Water:
Impacts on a Flow-Limited River, Mark Gerath, Fred
Sellars, Monique Villars and Lisa Wolf, (Environmental Engineering: Saving a Threatened Resource—In
Search of Solutions, F. Pierce Linaweaver, ed., 1992),
p122-127.

Perils of Point Loma, John Prendergast, CE Nov. 92,

p62-65

Urban Infrastructure: Our Crumbling POTW's, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p685-689.

Sewage treatment plants Motown Tunneling, Paul Tarricone, CE Apr. 92, p60-61.

Sewer design

Head Losses in Storm Sewer Manholes: Submerged Jet Theory, Flemming Bo Pedersen and Ole Mark, HY Nov. 90, p1317-1328.

Lessons Learned—Milwaukee Water Pollution Abatement Program, Gary D. Beech, ME Apr. 92, p186-191.

Livermore Lab Installs Sewer Diversion Facility, CE July 92, p20-21.

Velocity and Denth of Flow Calculations in Partially

Velocity and Depth of Flow Calculations in Partially Filled Pipes, A. Saatçi, EE Nov./Dec. 90, p1202-1208.

Sewer maintenance Lightweight Grout Eases Sewer Rehab, CE Feb. 92, p14,16. When Sewer Rehab Doesn't Stop Basement Flooding, Thomas Rowlett and Kenneth Kelgard, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p648-653.

Sewer pipes
Trenchless Repair Keeps Sewage and Business Flowing,
CE Sept. 92, p94.
Turning on the Waterworks, Donald E. Eckmann, CE
Aug. 92, p48-51.

Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, Raymond M. Wright, Igor Runge, Rajas Roy Chaudhury and Daniel W. Urish, (Water Resourcer Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467.

Degradation of Ground Water by Tetrachloroethylene, Wendy L. Cohen and Victor J. Izzo, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p63-68.

The Importance of Verified Simulation Model in a Sewerage Rehabilitation Program, Phil Wildbore, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p730-735.

Infrared Thermographic Sensing of Sewer Pipeline Problems, Gary J. Weil, (Water Resource—In Search of Solutions, Mohammad Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p890-895. Calibration and Validation of the Storm Water Manage-

Integrated GIS Solutions with Civil Engineering Projects, Jerry W. Williams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p328-331.

Manholes and Microtunneling, Evarett Cruz, Jr., CE Dec. 92, p52-55.

Motown Tunneling, Paul Tarricone, CE Apr. 92, p60-61. Multireservoir Sewer-Network Control via Multivariabl Feedback, A. Messmer and M. Papageorgiou, WI Nov./Dec. 92, p585-602.

Novi Dec. 92, p385-802.

Oxygen Transfer and VOC Emissions from Sewer Drop Structures, Richard L. Corsi, Jennifer Shepherd, Lori Kalich, Hugh Monteith and Henryk Melcer, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p305-310.

Planning Water Supply and Sanitation Projects in Developing Countries, Suley A. Muyibi, WR July/Aug. 92, p351-355.

A Review of Current UK Techniques for Rehabilitating Water Mains, M. P. Jones, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992).

The Total System Solution, David J. Daley and James B. Hinte, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647.

Velocity and Depth of Flow Calculations in Partially Filled Pipes, A. Saatçi, EE Nov./Dec. 90, p1202-1208.

Shaft resistance, piles

Load Transfer for Pipe Piles in Highly Pressured Dense Sand, Michael W. O'Neill and Richard D. Raines, GT Aug. 91, p1208-1226.

Analysis of Laterally Loaded Shafts in Rock, John P. Car-ter and Fred H. Kulhawy, GT June 92, p839-855.

Manholes and Microtunneling, Evarett Cruz, Jr., CE Dec. 92, p52-55.

The Reconstruction of the Morton Street Evacuation and Ventilation Shaft, Daniel M. Hahn, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p31-106.

Dynamic Interface Shear Strength Properties of Geomembranes and Geotextiles, M. K. Yegian and A. M. Lahlaf, GT May 92, p760-779.

Experimental Study of Secondary Systems in Base-Isolated Structure, G. Juhn, G. D. Manolis, M. C. Con-stantinou and A. M. Reinhorn, ST Aug. 92, p2204-2221.

Experimental Study of Sliding Isolated Structures with Uplift Restraint, Satish Nagarajaiah, Andrei M. Reinhorn and Michalakis C. Constantinou, ST June 92, p1666-1682.

Response of Model Pile Groups to Strong Shaking, W. D. Liam Finn and W. Blair Gohl, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p27-55.

Soil-Pile-Superstructure System in Liquefaction, S. Yao and K. Kobayashi, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p241-255.

Soil Suction-Potential Model, Abdulmohsin W. Dhowian, GT Apr. 92, p521-539.

Shallow foundations

Compaction of Granular Soils—Remarks on Quality Control, Michele Jamiolkowski and Erio Pasqualini, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), 9902-914.

Large-Scale Loading Tests of Shallow Footings in Pneumatic Caisson, Osamu Kusakabe, Yoshito Maeda and Masatoshi Ohuchi, GT Nov. 92, p1681-1695.

Probabilistic Evaluation of Bearing Capacity of Shallow Foundations, Azm S. Al-Homoud, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p352-355.

Settlements of Shallow Foundations on Cohesionle Soils, Basil P. Papadopoulos, GT Mar. 92, p377-393.

Approximation of Convective Processes by Cyclic AOI Methods, Guus S. Stelling and Jan J. Leendertse, (Estnarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p771-782.

Cohesionless Fine-Sediment Bed Forms in Shallow Flows, Peter A. Mantz, HY May 92, p743-764.

The Effect of Wave Grouping on the Characteristic Wave Height, Chia Chuen Kao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p83-86.

1992), p83-86. Environmental Monitoring and Operator Guidance System (EMOGS) for Shallow Water Ports, Andrew L. Silver, (Ports' 92, David Torseth, ed., 1992), p535-547. Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-256. Modeling Shallow Overland Flow in Surface Irrigation, B. L. Maheshwari and T. A. McMahon, IR Mar/Apr. 92, p201-217.

Modelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, N. Jothi Shankar, H. F. Cheong and C. T. Chan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), -660, 667.

Numerical Modeling of Proposed Kawaihae Harbor, HI, Linda S. Lillycrop and Stanley J. Boc, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992),

Bay by Finite Difference Method, Xiaoyong Zhan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p684-693.

Optimum Channel Contraction for Supercritical Flows, P. Rutschmann, O. F. Jiménez and M. H. Chaudhry, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p754-759.

Simulated Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p177-182.

tions, 1ed Engman, ed., 1992, p.177-182.
Tapping Shallow Groundwater with Horizontal Wells, Brian J. Boman and Donald R. Justice, (trrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p45-50.
Three-Dimensional Scattering of Solitary Waves by Vertical Cylinder, Keh-Han Wang, Theodore Y. Wu and George T. Yates, WW Sept./Oct. 92, p551-566.

George 1: Tates, www.Sept.Fuct. 92, p351-566. A Three-Dimensional Tidal Circulation Model Based on Semi-Implicit Finite-Difference Methods, Ralph T. Cheng and Vincenzo Casulli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p428-429.

Tide and Storm Surge Predictions Using Finite Element Model, J. J. Westerink, R. A. Luettich, A. M. Baptista, N. W. Scheffner and P. Farrar, HY Oct. 92, p1373-

1390

A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

Wave Exciting Forces on a Platform Fixed in Nonlinear Shallow Water Waves, Gregory S. Hook, Cheung H. Kim and Erick Huang, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p311-325.

Wave Forecasting for Construction in Mobile Bay, Scott L. Douglass, William W. Schroeder and John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p713-727.

Snape Boundary-Element Direct Reanalysis for Continuum Structures, J. H. Kane, B. L. Keshava Kumar and R. H. Gallagher, EM Aug. 92, p1679-1691. Effect of Footing Shape on Behavior of Cantilever Re-taining Wall, John S. Horvath, GT June 91, p973-978.

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401.

Furrow Geometric Parameters, Thomas J. Trout, IR Sept./Oct. 91, p613-634.

Mechanics of Shape Optimization in Plate Buckling, Mahesh D. Pandey and Archibald N. Sherbourne, EM June 92, p1249-1266.

Producing Armourstone Within Aggregate Quarries, Huanjin Wang, John-Paul Latham and Alan B. Poole, (Durability of Stone for Rubble Mound Breakwaters, Or-ville T. Magoon, ed. and William F. Baird, ed., 1992), p200-210.

Shape Optimization of Arch Dams for Static and Dynamic Loads, Bofang Zhu, Bin Rao, Jinsheng Jia and Yisheng Li, ST Nov. 92, p2996-3015.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Grad-ings, A. P. Bradbury and N. W. H. Allsop, [Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p64-81.

Transition Plate-Bending Elements for Compatible Mesh Gradation, Chang-Koon Choi and Yong-Myung Park, EM Mar. 92, p462-480.

U.S. Sludge Digesters: From Pancakes to Eggs, Teresa Austin, CE Oct. 92, p36-39.

Active Earth Pressure on Walls With Base Projection, Amjad F. Barghouthi, GT Oct. 90, p1570-1575.

Analysis of Internal Discontinuities in Geo-Materials, Dunia Perić, Stein Sture and Kenneth Runesson, Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p292-295.

Associative Plasticity for Dilatant Soils, Panos D. Kiousis and Ali A. Abdulla, EM Apr. 92, p763-785.

Bayesian Reliability Updating of Existing Steel Girder Bridges, Sami W. Tabsh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p55-58.

Fiber/Epoxy Composites Strengthen Bridge Columns, Ski Brown, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p691-695.

Flexural and Shear Studies of Carbon Fiber Reinforced Beams, Paul Zia, Shuaib H. Ahmad, Rakesh K. Garg and Kristina Hanes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p984-

Live Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nasaif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

Numerical Simulation of Dynamic Shear Transfer, T. Krauthammer and A. Koubaa, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p139-149.

Prying and Shear in End-Plate Connection Design, Cam-eron P. Chasten, Le-Wu Lu and George C. Driscoll, ST May 92, p1295-1311.

Relationships Between Error Estimation and Adaptive Computations in Strain Localization, D. Aubry and B. Tie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283.

Resonant Column Testing of Dynamic Rock Properties, D. V. Morris and J. G. Delphis, Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p527-530.

A Shear Locking Free Three-Node Triangular Plate Bend-ing Element for Moderately-Thick and Thin Symmetri-cally Cross-Ply Laminated Plates, Humayun R. H. Ka-bir, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p552-555.

Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-504.

Stresses in Open Section Fiber Reinforced Composite Beams Under Constant Shear Loading, Albert G. Zvar-ick and Thomas A. Cruse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1067-1070.

Transition Plate-Bending Elements for Compatible Mesh Gradation, Chang-Koon Choi and Yong-Myung Park, EM Mar. 92, p462-480.

Analysis of Thick Circular Plates Undergoing Large Deflections, M. Gorji, J. A. Abuyan and K. S. Y. Li, AS Jan. 92, p138-153.

Family of Iterative Shear-Deformation Theories for Sh low Shells, Zenon Rychter, EM Nov. 92, p2159-2175.

Improved Rectangular Element for Shear Deformable Plates, Fuh-Gwo Yuan and Robert E. Miller, EM Feb. 92, p312-328.

Timoshenko Beam Element Resting on Two-Parameter Elastic Foundation, L. M. Shirima and M. W. Giger, EM Feb. 92, p280-295.

Computation of Turbulent Shear Flow Over Surface Mounted Obstacle, Jianming He and Charles C. Song, EM Nov. 92, p2282-2297.

Song, EM Nov. 94, p.2282-2297.
Modeling the Chaotic Behavior in Simple Shear Granular Flows, Jan-Olov Aidanpäi, Hayley H. Shen and Ram Gupta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1031-1034.
Momentum and Energy Coefficients Based on Power-Law Velocity Profile, Cheng-lung Chen, HY Nov. 92,

Shear Flow Between Walls in Relative Motion, H. J. Leu-theusser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p608-611.

Shear forces

Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Far-rag and Victor Elias, GT Jan. 90, p54-72. Stability of Built-up Columns, Atle Gjelsvik, EM June 91, p1331-1345.

Shear lag
Formulas for Shear-Lag Effect of T-, and I-, and Box
Beams, Qi-gen Song and Alexander C. Scordelis, ST
May 90, p.1306-1318.

The shear con Shear-Lag Effect in Continuous

Prestress Influence on Shear-Lag Effect in Continuous Box-Girder Bridge, Shih Toh Chang, ST Nov. 92, p3113-3121.

Thin-Walled Multicell Box-Girder Finite Element, A. Ghani Razaqpur and Hangang Li, ST Oct. 91, p2953-2971.

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

Effect of Particle Contact Bond on Shear Modulus, Tzyy-Shiou Chang and Richard D. Woods, GT Aug. 92, p1216-1233.

p1216-1233.

Effect of Soil Plasticity on Cyclic Response, Mladen Vucetic and Ricardo Dobry, GT Jan. 91, p89-107.

Elastic Wood Properties from Dynamic Tests and Computer Modeling, Sven Ohlsson and Mikael Perstorper, ST Oct. 92, p2677-2690.

Evaluation of In Situ Effective Shear Modulus from Dispersion Measurements, Christos Vrettos and Bernd Prange, GT Oct. 90, p1581-1585.

Postdensification Properties Resistance of Clean Sands.

ostdensification Penetration Resistance of Clean Sands, G. Mesri, T. W. Feng and J. M. Benak, GT July 90,

Soil Behavior from Unconventional Loading Conditions, Kamal Tawfiq. (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p272-275

Stiffness Coefficients of Layered Soil Systems, A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624.

Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.

Shear Resistance Models for Concrete Bridges, Ahmed S. Yamani and Andrzej S. Nowak, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p809-811.

Shear strain

Development of Strain During Monotonic Shear of Soft Clay, Sam Frydman and Mark Talesnick, GT May 92, p704-725.

Shear strength

Analysis for Soil Reinforcement with Bending Stiffness,

R. A. Jewell and M. J. Pedley, GT Oct. 92, p.1505-1528.

Analysis of Slope Failure and Remedial Design of an

Earth Dam, Michael J. Mann and Robert E. Snow,

(Stability and Performance of Slopes and Embankments

II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,

1992), p923-939.

1992), 9923-939.

Availability of Shear Strength Reduction Technique, Tamotsu Matsui and Ka-Ching San, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), 943-460.

Case History Evaluating Field Vane Correction Factors, W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani and Henry T. Taylor, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p737-755.

Cause and Mechanism of Failure Kettleman Hills Landfill B-19, Phase IA, R. John Byrne, J. Kendall and S. Brown, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1188-1215.

Comparison of Field and Laboratory Residual Strengths, Timothy D. Stark and Hisham T. Eid, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-889.

889.
Conditions for Initiation of Rainfall-Induced Debris Flows, Nicholas Sitar, Scott A. Anderson and Kenneth A. Johnson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p834-849.
A Design Method for Reinforced Clay Embankments on Soft Foundations, Glen A. Roycroft, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1481-1492.

Determination of Interfacial Shear and Normal Stresses in Fiber Pull-Out, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1004-1007.

Tective Cohesion for Compacted Clay, Robert W. Day, GT Apr. 92, p611-619. Effective Coh

Effective Cohesion for Compacted Clay, Robert W. Day, GT Apr. 92, p611-619.

Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov. Dec. 92, p848-864.

Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, GT May 90, p774-789.

The Evaluation of Slope Stability—A 25 Year Perspective, Norbert R. Morgenstern, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1-26.

Field Load Test on Full-Scale Reinforced Concrete Frame, Tso-Chien Pan, Siu Tee Wong, Hee Kiat Cheong and Kok Wai Phang, CF Aug, 92, p137-150.

Finite Element Analysis and Design of Bridges in a Distributed Computing Environment, C. A. Hudson and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p671-678.

FS-1.5: Is It Appropriate for Embankment Design? Scott A. Ashford, Lawrence H. Roth, Sandra L. Madsen and Donald G. Anderson, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1112-11125.

Generalized State Parameter for Partly Saturated Soils, N. S. Pandian, T. S. Nagaraj and G. L. Siva Kumar Babu, GT Apr. 92, p622-627.

Influence of Particle Structure on Properties of Fly Ash and Sand, Krzysztof Parylak, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1031-1041.

Messured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports '92, David Torseth, ed., 1992), p376-389.

ed., 1992), p376-389.
The Mechanical Aging of Soils, John H. Schmertmann,
GT Sept. 91, p1288-1330.
Mechanisms of Strength Loss in Stiff Clays, Timothy D.
Stark and J. Michael Duncan, GT Jan. 91, p139-154.
Modeling Anisotropy of Clays at Critical State, S. The
vanayagam and J.-L. Chameau, EM Apr. 92, p786-806.
Modeling Strength of Sandy Gravel, Richard J. Fragaszy,
James Su, Farhat H. Siddiqi and Carlton L. Ho, GT
June 92, p920-935.

On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, p95-115.

Probabilistic Evaluation of Bearing Capacity of Shallow Foundations, Azm S. Al-Homoud, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p352-355.

Problems Related to Disposal of Fly Ash and its Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p774-285.

Seismic Behavior and Shear Strength of Framed Joint Using Steel-Fiber Reinforced Concrete, Jiuru Tang, Chaobin Hu, Kaijian Yang and Yongcheng Yan, ST Feb. 92, p341-358.

Shear Connectors in Composite Beams with Longitudi-

Feb. 92, p341-338.

Shear Connectors in Composite Beams with Longitude naily Cracked Slabs, Deric John Oehlers and Sung Moo Park, ST Aug. 92, p2004-2022.

E. Shewbridge and Nicholas Sitar, (Stability analysis, Scott E. Shewbridge and Nicholas Sitar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370.

Simple Procedure for Determining Cap-Plasticity-Model Parameters, Tien-Kuen Huang and Wai-Fah Chen, Grant Mar. 90, p492-513.

Slab Behavior in Composite Beams at Openings. I: Analysis, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p2287-2303.

92, p.2281-2-303.
Slab Behavior in Composite Beams at Openings. II: Tests and Verification, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p.2304-2322.
Soil Strengths from Back Analysis of Slope Failures, J. Michael Duncan and Timothy D. Stark, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p890-

Stability Analysis of a Municipal Solid Weste Landfill, Jonathan D. Howland and Arvid O. Landva, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992).

p1216-1231.

pi216-1231.

Stability and Closure Design for a Landfill on Soft Clay and Peat, Richard A. Mitchell, Sybil E. Hatch and Ronald A. Siegel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p685-704.

Stability Evaluation During Staged Construction, Charles C. Ladd, GT Apr. 91, p540-615.

Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1050-1065.

Stability of the Olga C Test Embankment, J. G. Lavallée, G. Si-Arnaud, R. Gervais and Y. Hammamij, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1006-1021.

p1006-1021.

State-of-the-Art: Static Stability and Deformation Analysis, J. Michael Duncan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p222-266.

Strain-Softening Behavior of Granular Soil in Strain-Path Testing, J. Chu, S.-C. R. Lo and I. K. Lee, GT Feb. 92, p191-208.

Strength Parameters for Cut Slope Stability in "Marine" Sediments, J. L. M. Clemente, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p865-875.

Stress-Strain-Strength Responses of Compressible Chicago Glacial Clays, Richard J. Finno and Choong-Ki Chung, GT Oct. 92, p1607-1625.

Study of Slope Stability Analysis, R. J. Deschamps and G. A. Leonards, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p267-291.

Undrained Analysis of Slopes Based on Effective Stress Methods, John F. Peters, Chris L. Saucier and Oswald Rendon-Herrero, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p493-505.

Shear stress
Boundary Shear Stress and Roughness Over Mobile Alluvial Beds, Peter J. Whiting and William E. Dietrich,
HY Dec. 90, p1495-1511.

Cohesionless Fine-Sediment Bed Forms in Shallow Flows, Peter A. Mantz, HY May 92, p743-764. Determination of Interfacial Shear and Normal Stresses in Fiber Pull-Out, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1004-1007.

Flow Dynamics in an End-to-End Vascular Graft Junction, Y. H. Kim and K. B. Chandran, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p964-967.

ed., 1992), p964-967.

Flow Field Induced by Sea Waves Over Brick-Pattern Ripples, G. Vittori, HY Sept. 92, p1241-1259.

Fluid Dynamics at the Carotid Bifurcation, A. S. Anayiotos, D. P. Giddens, S. A. Jones, S. Glagov and C. K. Zarins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-847.

Investigation of Zebra Mussel Adhesion Strength Using a Rotating Disk, Josef Daniel Ackerman, C. Ross Ethier, D. Grant Allen and Jan K. Spelt, EE Sept./Oct. 92, p708-724.

Measurement and Prediction of Surface Street Sect.

Measurement and Prediction of Surface Shear Stress in Annular Flume, D. I. Graham, P. W. James, T. E. R. Jones, J. M. Davies and E. A. Delo, HY Sept. 92, p1270-1286.

p1270-1286.

Modeling 3-D Circulation Using the DSS Technique, R.
A. Luettich, Jr., S. Hu, J. J. Westerink and N. W.
Scheffner, (Estuarine and Coastal Modeling, Malcolm
L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg,
ed. Ralph Cheng, ed. and Craig Swanson, ed., 1992),
p632-643.

Motion of Contact-Load Particles at High Shear Stress, Fidelia N. Nnadi and Kenneth C. Wilson, HY Dec. 92,

p1670-1684.

Shear-Stress Distribution in Symmetrically Tapered Can-tilever Beam, Edwin P. Russo and Gregory Garic, ST Nov. 92, p3243-3249.

Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.

Velocity Distribution Inside and Above Branched Flexi-ble Roughness, Omnia El-Hakim and Mohamed M. Sa-lama, IR Nov./Dec. 92, p914-927.

ear tests

Comparison of Field and Laboratory Residual Strengths, Timothy D. Stark and Hisham T. Eid, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-

Computer Simulation of Direct Shear Test, Jeen-Shang Lin, John M. Ting, Baliso Vuba and Shiou Chen, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p425-428.

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

D. Woods, GT July 90, p1116-1131.
Field Load Test on Full-Scale Reinforced Concrete Frame, Tso-Chien Pan, Siu Tee Wong, Hee Kiat Cheong and Kok Wai Phang, CF Aug, 92, p137-150.
In-Place Shear Testing of Tile, Arthur P. Reed, Bruce A. Suprenant and Jim Acri, MT Aug, 92, p264-274.
Pelton Landslide: An Unusual Double-Wedge Failure, Derek H. Cornforth and D. Andrew Vessely, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), n310-326. p310-324.

p310-324.

Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

Properties of PVB Interlayer Used in Laminated Glass, C. V. Girija Vallabhan, Y. C. Das and Manjunatha Ramasamudra, MT Feb. 92, p71-76.

Shear Zone Formation and Slope Stability Analysis, Scott E. Shewbridge and Nicholas Sitar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370.

hear walls

Design Considerations for Using Adhesives in Shear Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

Failure Analysis of Masonry Structures, P. B. Shing, H. R. Lotfi, A. Barzegarmehrabi and J. Brunner, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p780-783.

Finite Element Model for Seismic RC Coupled Walls Having Sleader Coupling Beams, Omar Chaallal, ST Oct. 92, p2936-2943.

Finite Element Modeling of Concrete Expansion and Confinement, F. J. Vecchio, ST Sept. 92, p2390-2406. Incorporating Load Sharing in Shear Wall Design of Light-Frame Structures, Bohumil Kasal and Robert J. Leicht, ST Dec. 92, p3350-3361.

Shear Flow Between Walls in Relative Motion, H. J. Leu-theusser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p608-611.

Effects of Multiple Modes on Rayleigh Wave Dispersion Characteristics, Kohji Tokimatsu, Shuji Tamura and Hisaya Kojima, GT Oct. 92, p1529-1543.

Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodri-guez, Maria C. Arbelaez, Takenori Satoh and Edward Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992), p390-402.

Stress Wave Interaction in Finite Beam on Elastic Foundation, M. C. Wang and C. S. Little, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p580-583.

Use of Short-Period Microtremors for V<sub>p</sub> Profiling, Kohji Tokimatsu, Kenichiro Shinzawa and Shinichi Kuwaya-ma, GT Oct. 92, p1544-1558.

Crushing Response of Energy Absorbing Composite Structure, Gary L. Farley, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p876-879.

## Sheet metal

Failure Prediction of Anisotropic Material, Photios P. Papados and Paul N. Roschke, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1012-1015.

## Sheet piles

Numerical Study of Soil Anisotropy, A. Anandarajah, EM Jan. 92, p211-216.

Replacement of a Deteriorated Steel Sheet Pile Bulkhead, Vincent G. Miller and Vladimir Ostrov, (*Ports '92*, David Torseth, ed., 1992), p826-835.

Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, Thanasis C. Trian-tafillou, Nikolaos Plevris and Nikola Deskovic, (Mate-rials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717.

Properties of Gypsum Wallboards Containing Fly Ash, Ramesh C. Joshi, Joonu O. Thomas and Rex B. Adam, MT May 92, p212-225.

Analytical Solutions for Thick, Doubly Curved, Laminat-ed Shells, Jiarang Fan and Juyong Zhang, EM July 92,

Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p912-915. Engineering Mechanics, Loren D. Eutes, ed. and John M. Niedzwecki, ed., 1992), p912-915. Engineer for little County Methods of County States of the States

Force Deformation Equations for Initially Curved Laterally Loaded Beam Columns, R. E. McConnel, EM July 92, p1287-1302.

Integrated Physical Model for Cylindrical Shells, Deme-tres Briassoulis, ST Aug. 92, p2168-2185.

Nonlinear Geometric and Material Considerations in Shell Structures, S. A. Schimmels and A. N. Palazotto, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p548-551.

Stiffened Sheathings of Orthotropic Cylindrical Shells, P. Rigo, ST Apr. 92, p926-943.

Tolerance Limits for Geometric Imperfections in Hyper-bolic Cooling Towers, A. Alexandridis and N. J. Gard-ner, ST Aug. 92, p2082-2100.

# Shellfish

Hydraulic Structures Versus Zebra Mussels, John J. In-gram and Andrew C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611.

Axisymmetric General Shells and Jointed Shells of Revo-lution, Pei Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

Dimensional Analysis of Buckling of Stiffened Composite Shells, B. Moradi and I. D. Parsons, EM Mar. 92, p557-574.

Postbuckling Behavior of Stiffened Composite Shell Panels, S. Sridharan, A. Kasagi and M. Zeggane, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p648-651.

Tensile-Integrity Structural Concepts for the Lunar Surface, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1922).

esign of Bridge Pier Pile Foundations for Ship Impact, Bogdan O. Kuzmanovic and Manuel R. Sanchez, ST Aug. 92, p2151-2167.

Salp motion
Barbers Point Harbor: A Unique Solution for Port Upgrade, Michael J. Briggs and Eivind Bratteland, (Ports '92, David Torseth, ed., 1992), p777-790.
Environmental Monitoring and Operator Guidance System (EMOGS) for Shallow Water Ports, Andrew L. Silver, (Ports '92, David Torseth, ed., 1992), p535-547.
Los Angeles-Long Beach Harbors Model Enhancement Program, William C. Seabergh, S. Rao Vemulakonda and James Rosati, III., (Ports '92, David Torseth, ed., 1992), p884-897.

Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p591-

Water-Level Oscillations in Esperance Harbour, Michael L. Morison and Jörg Imberger, WW July/Aug. 92, p352-367.

# Shipbuilding

A Removable Submarine Cover for Drydock No. 2 Modernization, Ted Bobroski and Joseph J. Bonasia, (*Ports* '92, David Torseth, ed., 1992), p506-519.

"92, David Torseth, ed., 1992), p506-519.

Shipping
An Analysis of Contingencies for Making Casks Available for Use During the Early Years of Federal Waste Management System Operations, P. E. Johnson, D. S. Joy, R. B. Pope, L. B. Shappert, M. W. Wankerl, R. E. Best, F. L. Danese and S. Schmid, (High Level Radioactive Waste Management Program Committee, 1992), p1310-1316.

Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. L. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

An Assessment of the Transportation Costs of Shipping Non-Fuel Assembly Hardware to FWMS Facilities, L. B. Shappert, P. E. Johnson, D. S. Joy, R. E. Best and F. L. Danese, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), p190-195.

A Comparison of a New Generation of Spent Fuel Cask

gram Committee, 1992), p190-195.

A Comparison of a New Generation of Spent Fuel Cask Designs with Current Cask Design Characteristics, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1839-1843.

Data Bases About the Transportation of Radioactive Materials, Cheryl Cashwell and James D. McClure, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p427-431.

Data Needs for Locatine Emergency Response Units.

Data Needs for Locating Emergency Response Units, George F. List, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p437-441.

Development Status of the GA-4 and GA-9 Casks, Robert M. Grenier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1832-1838.

gram Committee, 1992, p.1632-1636.
An Evaluation of the Proposed Tests with Radioactive Waste at WIPP, Lokesh Chaturvedi and Matthew Silva, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p600-609.

Issues Related to the Transport of a Transportable Storage Cask After Storage, P. McConnell, T. L. Sanders, L. Brimhall, J. M. Creer, E. R. Gilbert and R. H. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180.

Mechanical Response of Cellular Materials Used in Waste Shipping Containers, A. K. Maji, S. Donald and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p308-

Method for Relating Impacts with Yielding and Unyielding Targets, D. J. Ammerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2255-2259

Near-Field Radiation Doses from Transported Spent Nu-clear Fuel, R. F. Weiner and K. S. Neuhauser, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), pl 205-1208.

(Juality Assurance in a Cask Fleet Parts Control System, Charles Fernandez, P. N. McCreery and L. B. Shappert, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1343-1348.

Level Radioactive Waste Management Program Committee, 1992), pl 343-1348.

Risk Assessment of Shipping Radioactive Waste Using the Standard Waste Box, O. S. Wang, R. F. Carlstrom, G. A. Coles and M. V. Shultz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p416-420.

Routine Methods for Post-Transportation Accident Recovery of Spent Fuel Casks, L. B. Shappert, R. B. Pope, R. E. Best and R. H. Jones, (High Level Radioactive Waste Management Program Committee, 1992), p1855-1859.

Safety Analysis for Waste Transports to the Planned Final Waste Repository KONRAD, F. Lange, D. Gründler and G. Schwarz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p421-426.

Shipping Cask Development Loaded 4 PWR Fuel Assemblies, H. Y. Kang, J. C. Lee and S. G. Ro, (High Level Radioactive Waste Management Program Committee, 1992), p1844-1847.

Validation of the TEXSAN Thermal-Hydraulic Analysis

Validation of the TEXSAN Thermal-Hydraulic Analysis Program, S. P. Burns and D. E. Klein, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Ships
Broadside Current Forces on Moored Ships, William N.
Seelig, David Kriebel and John Headland, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p326-340.

Bulk Commodity Terminals—Planning for the Future Competitive and Environmental Challenges, Gordon W. Zonailo, (Ports '92, David Torseth, ed., 1992), p695-708.

p695-708. Floating or Fixed Dock for RO/RO Ship Operations, Bankim Mallick and Curtis L. Ratcliffe, (Ports '92, David Torseth, ed., 1992), p709-722. Honolulu Harbor Ship Traffic Simulation and Animation Study, James R. Walker, Vedat Demirel and Michael C. Leue, (Ports '92, David Torseth, ed., 1992), p868-

Modifications to Coal Pier 6 Made Necessary by a Deeper Channel, Zolan Prucz, Barney T. Martin and Jerry L. Richstein, (Ports '92, David Torseth, ed., 1992), p164-

Ship Simulation of the Houston Ship Channel, Houston, Texas, Dennis W. Webb and J. Christopher Hewlett, (Ports '92, David Torseth, ed., 1992), p898-911.

(Ports '92, David Torseth, ed., 1992), p898-91.
Ship-Berth Link as Bulk Queueing System in Ports, Zoran R. Radmilovich, WW Sept./Oct. 92, p474-495.
Should the U.S. Accept the Concept of Navigable Depth? John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Teeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082.
Use of Portable Simulator in Designing Channel mprovements for Port of Brownsville, Texas, Dennis Wayne Webb and Larry Leon Daggett, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614.

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Shoaling
Beach-Nourishment Performance Predictions, R. G.
Dean and Chul-Hee Yoo, WW Nov/Dec. 92, p567586.

Defect of Jetty Configuration on Wave Conditions and Dredge Quantities at Green Harbor, MA, Cheryl E. Burke, Joan Pope and Mary A. Cialone, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p462-478.

ped2-478.

Evaluation of Proposed Port Facilities, Charleston Harbor, South Carolina, Samuel B. Heltzel, (Ports '92, David Torseth, ed., 1992), p791-801.

Laboratory Simulations of Directionally Spread Shoaling Waves, Steve Elgar, R. T. Guza, M. H. Freilich and M. J. Briggs, WW Jan./Feb. 92, p87-103.

Longshore-Transport Model for South Indian and St. Lankan Coasts, P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-424.

Measured Internal Kinematics for Shoaling Waves with Theoretical Comparisons, M. W. Griffiths, W. J. Easson and C. A. Greated, WW May/June 92, p280-299.

Nonlinear Shoaling and Impact of Waves on Coastal Structures, S. T. Grilli, M. A. Losada, F. Martin and A. Svendsen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82.

Santa Barbara Harbor Assessment of Shoaling Frequency,

ed. and John M. Niedzwecki, ed., 1992), p.19-82.
Santa Barbara Harbor Assessment of Shoaling Frequency,
Russell H. Boudreau, Alan Alcorn and Stephen Fine,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p447-461.
Sediment Management with Submerged Vanes. II: Applications, A. Jacob Odgaard and Yalin Wang, HY Mar.
91, p284-302.

Shoaling and Breaking of Random Wave Trains: Spectral Approaches, James T. Kirby, James M. Kaihatu and Hajime Mase, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p71-

Shoaling and Decay of Two Wave Trains on Beach, Jane McKee Smith and Charles L. Vincent, WW Sept./Oct. 92, p517-533.

92, p317-335.
Simple Conceptual Explanation of Down-Drift Offset Inlets, Scott L. Douglass, WW Mar/Apr. 91, p136-142.
Using a Numerical Model to Evaluate Dredging Options, Ronald R. Copeland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1024-1029.

Shock

Shock
Measurement of Shock Pressure from FWD on a Concrete Pavement by Impedance-Matched Shock Gauge, Piyush K. Dutta and John Kalafut, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228. Shock Pattern at Abrupt Wall Deflection, Markus Schwalt and Willi H. Hager, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p231-236.

Shock waves

Shock waves

Experiences in Using C++ to Develop a Next Generation

Strong Shock Wave Physics Code, James S. Peery and
Kent G. Budge, (Computing in Civil Engineering and
Geographic Information Systems Symposium, Barry J.

Goodno, ed. and Jeff R. Wright, ed., 1992), p527-534.

Goodno, ed. and Jeff R. Wright, ed., 1972-1, p.22-7-39-4.
Massively Parallel Computing, C+- and Hydrocode Algorithms, Allen C. Robinson, Arlo L. Ames, H. Elot Fang, Dion Pavlakos, Courtenay T. Vaughan and Philip Campbell, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p519-526.

Goodno, ed. and Jeff K. Wright, ed., 1992.), p519-520.
Optimum Channel Contraction for Supercritical Flows,
P. Rutschmann, O. F. Jiménez and M. H. Chaudhry,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p754-759.

Shockley, Woodland G.
Death Claims Two Honorary Members of ASCE, CE Apr.
92, p68,70-71.

Shopping centers

Improvements on Quantifying Pass-By Trips for Shopping Centers, Rahim F. Benekohal, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p47-51.

Network Model Analysis of Traffic Patterns Resulting from a Proposed Regional Mall, Stephen Lawe, Nor-man Marshall and Peter Ryner, (Site Impact Traffic As-sessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.89-93.

Traffic Impact Study for a Regional Shopping Center at a Basque City. A European View, Mikel Murga, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), 984-88.

Shore protection
Articulating Block Mat Revetment for Whaler's Village,
Robert A. Nathan and David G. Cannon, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992),
p268-284.

R. Koopmans and R. B. Watts, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p82-94.

Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p82-94.

Constorations in Using Bragg Reflection for Storm Erosion Protection, James A. Bailard, Jack W. DeVries and James T. Kirby, WW Jan./Feb. 92, p62-74.

Construction on Wisconsin's Lake Michigan Coast, J. Philip Keillor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p62-76.

Design of Protective Dunes at Dam Neck, Virginia, John R. Headland, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p251-267.

Development of Detached Breakwater Design Criteria Using a Shoreline Response Model, Julie Dean Rosati, Mark B. Gravens and Monica A. Chasten, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p814-829.

Effects of Bottom Friction on Wave Breaking Using RCPWAVE Model, Jerome P.-Y. Maa and S.-C. Kim, WW July/Aug, 92, p387-400.

Field Monitoring of a Modular Detached Breakwater System, Robert M. Sorensen and J. Richard Weggel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p189-204.

Mitigation of Harbor Caused Shore Erosion with Beach Nourishment Delayed Mitigation, St. Joseph Harbor, MI, Charles N. Johnson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p90-103.

Value Engineering in Coastal Design, Jack C. Cox, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p36-103.

Value Engineering in Coastal Design, Jack C. Cox, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p935-951.

Shoreline changes

Application of a Beach Plan Evolution Model in Sergipe, Brazil, Otavio J. Sayao and K. C. Ander Chow, (Coar-al Engineering Practice '92, Steven A. Hughes, ed., 1992), 924-250.

Beach-Nourishment Performance Predictions, R. G. Dean and Chul-Hee Yoo, WW Nov./Dec. 92, p567-586

Coastal Geomorphology and Sand Budgets Applied to Beach Nourishment, Timothy W. Kana and F. David Stevens, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p29-44.

Development of Detached Breakwater Des Using a Shoreline Response Model, Julie Dean Rosati, Mark B. Gravens and Monica A. Chasten, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p814-829.

p814-829.

Observation of the Post-Construction Performance of a System of Groins along an Eroding Beach, C. I. Moutzouris, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-319.

Simple Conceptual Explanation of Down-Drift Offset Inlets, Scott L. Douglass, WW Mar/Apr. 91, p136-142.

Shoreline Profile of Stokes-Mode Edge Waves, Harry H. Yeh, WW Jan./Feb. 92, p112-116.

horing

Construction Induced Movements of Insitu Walls, G. Wayne Clough and Thomas D. O'Rourke, (Design and Performance of Earth Retaining Structures, Philip Lambe, ed. and Lawrence A. Hansen, ed., 1990), p439-470.

Permanent Excavation Support and Underpinning in Sands: A Case History, Russell J. Morgan, Lawrence F. Johnsen and Franklin M. Grynkewicz, (Grouting, Soil Improvement and Geosynthelics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p778-

Preliminary Design for NATM Tunnel Support in Soil, Eric Leca and G. Wayne Clough, GT Apr. 92, p558-575.

Shredders

Routes to Chaos of a Vertically Rotating Pendulum, S. Yip and F. DiMaggio, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p672-675.

p672-675.

Shriakage

Analysis of Circular RC Columns for Short- and LongTerm Deformations, Mark Andrew Bradford and R.

Ian Gilbert, ST Mar. 92, p669-683.

Composite Beams with Partial Interaction under Sustained Loads, Mark Andrew Bradford and R. Ian Gilbert, ST July 92, p1871-1883.

Creep Effects in Composite Beams with Flexible Shear

Connectors, Angelo Marcello Tarantino and Luigino
Dezi, ST Aug. 92, p2063-2081.

Drying and Cracking Effects in Box-Girder Bridge Segment, Zdeněk P. Bažant, Vladimír Křístek and Jan L.

Vítek, ST Jan. 92, p305-321.

The Effects of Fillers and Admixtures on Grout Performance, Sandra Z. Tosca and Jeffrey C. Evans, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p337-349.

p337-349.

Reliability Analysis of Creep and Shrinkage Effects, C. Q. Li and R. E. Melchers, ST Sept. 92, p2323-2337.

Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsan, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p215-225.

Strength and Shrinkage of Natural Pozzolanic Mortar in Hot Weather, Jihad S. Sawan, MT May 92, p153-165.

Time-Dependent Analysis of Composite Steel-Concrete Sections, R. Ian Gilbert, ST Nov. 89, p2687-2705.

Sight distances
Exact Minimum Sight Distance on Sag Curve with Centered Overpass, Said M. Easa, TE July/Aug. 92, p588-

Signal processing
Frequency Domain Analysis of Undamped Systems,
Eduardo Kausel and Jose M. Roësset, EM Apr. 92,

ural Networks in Dynamic Analysis of Bridges, Stuart S. Chen and Ketan Shah, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1058-1065.

Signalized intersections
Change Intervals and Lost Time at Single-Point Urban
Interchanges, James A. Bonneson, TE Sept./Oct. 92,

post-1-030. Comparison of Delay and ICU Analyses—Case Study, Cathy Higley and Venu Sarakki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p21-25.

Computerized Solution for Signalized Intersection Service Volumes, James W. Epps, TE July/Aug. 92, p496-516.

516.
Flow Rates at Signalized Intersections Under Cold Winter Conditions, Jan L. Botha and Thomas R. Kruse, TE May/June 92, p439-450.
ICU—A Method of Analyzing Signalized Intersections, Weston S. Pringle and Robert W. Crommelin, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p26-31.
The Isolated Signalized Intersection as a Mitigation on a High-Speed Highway, Thomas C. Ferrara, A. Reed Gibby and Simon P. Washington, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p57-61.
Knowledge-Based System for Design of Signalized Intersections, J. S. Linkenheld, R. F. Benekohal and J. H. Garrett, Jr., TE Mar/Apr. 92, p241-257.

Saturation Flow and Capacity of Shared Permissive Left-Turn Lane, Feng-Bor Lin, TE Sept./Oct. 92, p611-630.

Signing Systems: Directional, Identity, and Graphic Systems for the Port of Long Beach, Mackey W. Deasy, Wayne Hunt and Louis Rubenstein, (Ports '92, David Torseth, ed., 1992), p85-93.

Aerogei—A Transparent, Porous Superinsulator, Arlon J. Hunt, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p398-403.

Alkali-Silica Reactivity: An Overview of a Concrete Durability Problem, D. Stephen Lane, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p231-244.

Bonding Strength of Grouts and Behavior of Silicate Grouted Sand, C. Vipulanandan and A. Ata, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p700-711.

Current Chemical Grout Engineering in Japan, Ryozo Yonekura and Munchiko Kaga, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-

Effects of Mixing on Rheological Properties of Microfine Cement Grout, Lois G. Schwarz and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthet-ics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p512-525.

Fracture Toughness for Steel Fiber-Cement Paste Interfa-cial Zone, Mitsunori Kawamura and Shin-ichi Igarashi, MT Aug. 92, p227-239.

Improved Performance of Activated Sludge with Addition of Inorganic Solids, Robert B. Bowen and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p474-479.

Review and Evaluation of the Use of Microsilica as an Admixture in Concrete, Brett Gunnink and Fahad Alnowaiser, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p92-103.

Current Chemical Grout Engineering in Japan, Ryozo Yonekura and Munehiko Kaga, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-

Mechanical Properties of Microfine Cement/Sodium Sili-cate Grouted Sand, Raymond J. Krizek, Hung-Jiun Liao and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1922, p688-699.

Microfine Cement/Sodium Silicate Grout, Hung-Jiun Liao, Roy H. Borden and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p676-687.

Road Aggregate Choice Based on Silicate Quality and Bi-tumen Adhesion, Petri V. Peltonen, TE Jan./Feb. 92, p50-61.

Vacuum Melting and Mechanical Testing of Simulated Lunar Glasses, J. E. Carsley, J. D. Blacic and B. J. Plet-ka, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1219-1231.

Analysis of Delamination of Post-Tensioned Silos, Judith J. Stalnaker and Mark D. Fugler, ST Apr. 92, p1014-1022

Design and Performance of Two Port Silos on Improved Ground, M. U. Ergun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p842-854.

Design Implications of Measured Pressures and Strains in Silos, Geoffrey E. Blight, ST Oct. 92, p2729-2742.

Integrated Physical Model for Cylindrical Shells, Deme-tres Briassoulis, ST Aug. 92, p2168-2185.

Sludge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Ba-log, Manu A. Patel and Turgay M. Ertugrul, Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992, p. 303-308.

Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), J. L. Sherard and L. P. Dunnigan, (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p533-554. Filters for Silts and Clays (Paper introduced by James R. Talbot), James L. Sherard, Lorn P. Dunnigan and James R. Talbot, (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p38.4.407. p384-402.

p384-402.
Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, Kevin A. Pierce and Laszlo Buzasi, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p663-679.
Pelton Landslide: An Unusual Double-Wedge Failure, Derek H. Cornforth and D. Andrew Vessely, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), n310-324. p310-324.

Static Instability and Liquefaction of Loose Fine Sandy Slopes, Poul V. Lade, GT Jan. 92, p51-71.

ilty soils

any some odeling of Lateral Spreads in Silty Sands by Sliding Soil Blocks, Ricardo Dobry and Mohammad H. Baziar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p625-652.

Development of Strain During Monotonic Shear of Soft Clay, Sam Frydman and Mark Talesnick, GT May 92, p704-725.

Micromechanical Model to Predict Sand Densification by Cyclic Straining, Ricardo Dobry and Emmanuel Petrakis, EM Feb. 90, p288-308.

Simulation
An Accelerated Pavement Testing System, Thomas D.
White, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.
Eaton, ed., 1992), pl 12-124.
Analysis and Implementation of Thin-Layer Element for Interfaces and Joints, K. G. Sharma and C. S. Desai, EM Dec. 92, p2442-2462.

EM Dec. 92, p2442-2462.
Analysis of Dredged Material Deposition Patterns, Eric E. Nelson and Billy H. Johnson, (Ports '92, David Torseth, ed., 1992), p470-479.
An Analysis of Human Performance in Simulated Partial-Gravity Environments, Nathan R. Moore and David J. Gutierrez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2282-2292.
Analytical Hydraulic Modeling of Road Culverts, Rohin S. Saleh and Ralph Hwang, (Water Resources Planning and Management. Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p798-803.

p198-803.

An Approach for Incorporating Inflows Uncertainty in Management Models, Luis Vives, Jesús Carrera and Richard N. Palmer, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p84-89.

p84-89.
spects of Parallel Processing in Reservoir Simulation, Richard Ewing, Patrick O'Leary and James Sochack, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p111-114.
ssessing Time-Variant Bridge Reliability Due to Pier Scour, Peggy A. Johnson and Bilal M. Ayyub, HY June 92, p887-903.

92, p887-903.

Bootstrapping Models Using Existing Databases and Object Orientation, Rene F. Reitsma and David Sieh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p598-605.

BRASS Modeling of Loiza Reservoir, Puerto Rico, for Sediment Management Operations, Gregory L. Morris, Raul Colón, Robert Laura and G. T. Anderson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p837-842.

Calibrating SHE Soil-Erosion Model for Different Land Covers, J. M. Wicks, J. C. Bathurst and C. W. Johnson, IR Sept./Oct. 92, p708-723.

Characteristics of High-Speed Runway Exits for Airport Design, Antonio A. Trani, Antoine G. Hobeika, Byung J. Kim, Hisao Tomita and David Middleton, (International Air Transportation: A New International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24.

Computation Method for Regulating Unsteady Flow in Open Channels, Fubo Liu, Jan Feyen and Jean Berlamont, IR Sept./Oct. 92, p674-689.

Computer-Aided Support for Water Quality Modeling of the Russian River, John F. DeGeorge and Gerald T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p182-187.

Continuum Model for Flows in Emergent Marsh Vegetation, Lisa C. Roig and Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p268-279.

A Demand Driven Decision Support System for Operation of Reservoirs, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resource» Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p261-566.

Densification/Creep Behavior of Experimental Glass-Ceramic Waste Forms for Immobilization of Hinker Ceramic Waste Forms for Immobilization of Hinker Ceramic Waste Forms for Immobilization of Hinker Ceramic Ceramic

p301-300. Densification/Creep Behavior of Experimental Glass-Ceramic Waste Forms for Immobilization of High-Level Calcined Waste at the Idaho Chemical Processing Plant. Krishna Vinjamuri, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p300-303.

1992), p300-303.

A Description of LANDSIM and its Uses, Thomas S. Russell, Jr., Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitier and Michael E. Zientek, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p34-941.

Developments of Modelling Software for Civil Engineers, J. C. M. Dijkzeul, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p56-60.

Digital Simulation of Wind Load Effects, Ahsan Kareem and Yousun Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p284-287.

p284-287.

p284-287.

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, John L. Smoot, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p345-351.

Discussion of the Numerical Modeling of Sea Ice Ridging, Mark A. Hopkins, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p388.891.

D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p888-891.
 A Distributed Particle Simulation Code in C++, David W. Forslund, Charles Wingate, Peter Ford, J. Stephen Junkins and Stephen C. Pope, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518.
 Empirical Simulation of Future Hurricane Storm Histories as a Tool in Engineering and Feonomic Analysis.

Empirical Simulation of Future Hurricane Storm Histories as a Tool in Engineering and Economic Analysis, Leon Borgman, Martin Miller, Lee Butler and Robin Reinhard, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), p42-65.

Evaluation of Dewatering and Treatment System at the Chisman Creek Superfund Site, Precha Yodnane, Denis W. Okom and Burton M. Marshall, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p250-255.

Evaluation of Probabilities Using Orientated Simulation, Alberto H. Puppo and Raul D. Bertero, ST June 92, p1683-1704.

p1683-1704. Evaluation of Seismic Soil Response Using Stochastic Linearization, Jeen-Shang Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p356-359. Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p180-200. Sadeh, ed., Stein 1992), p189-200.

Feedback Mechanisms for Operational Simulation, Amr A. Oloufa and Keith C. Crandall, CP Apr. 92, p161-177.

177.
Flow Distribution in a Stacked Clarifier, M. Padmanabhan, T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633.
Formulation of a Knowledge-Base for Building Design Simulation, Claude Bédard and Mathi Ravi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodono, ed. and Jeff R. Wright, ed., 1992), p1129-1138.
Habitat Simulation in United States, Britain, and France, Robert T. Milhous, Ian Johnson, Yves Souchon and Sylvie Valentin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p362-367. 367.

High Order Statistics in Structural Reliability, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p244-247.

247.
1 Situ Testing Program at the Waste Isolation Pilot Plant, T. M. Schultheis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1090-1091.
Initial Comparison of Leach Behavior Between Fully Radioactive and Simulated Nuclear Waste Glasses Through Long-Term Testing, Part 1. Solution Analysis, Xiangdong Feng and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p325-933.

caanoacure waste Management, High Level Radioactive Waste Management Program Committee, 1992), p925-933.

Laboratory Simulations of Directionally Spread Shoaling Waves, Steve Elgar, R. T. Guza, M. H. Freilich and M. J. Briggs, W. W. Jan. Theb. 92, p87-103.

Limiting Design Parameters for Accelerated Pavement-Testing System, T. D. White, J. M. Albers and J. E. Haddock, Sr., TE Nov./Dec. 92, p787-804.

Mapping Slope Failure Potential Using Fuzzy Sets, C. H. Juang, D. H. Lee and C. Sheu, GT Mar. 92, p475-494.

Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, Mark P. Nathan, Frank Barnes, Hon-Yim Ko and Stein Sture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-457.

Massively Parallel Computing, C++ and Hydrocode Algorithms, Allen C. Robinson, Arlo L. Ames, H. Eliot Fang, Dino Pavlakos, Courtenay T. Vaughan and Philip Campbell, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p519-526.

Mechanical Properties of Compacted Lunar Simulant Using New Vacuum Triaxial Equipment, Chandra S. Desai, Hamid Sandatmanesh and Tom Allen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p518-527.

Method for Simulating Tension Performance of Lumber Members, Steven M. Cramer and William B. Fohrell, ST Oct. 90, p2729-2746.

M. B. Huang, (Engineering Mechanics) Loren D. Lurs ed.

ST Oct. 90, p2729-2746.

Micromechanical Simulation of Wave Propagation in Dense Granular Assemblies, J. S. Lee, M. Y. Ma and A. B. Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p417-420.

Model Development for Operational Use to Help Spill Combating and Sea Rescue, Heimo Vepsä, Erkki Alasaarela and Juha Sarkkula, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alah Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p149-156.

Modeling Effects of Chemical Explosives for Excavation on Moon, Deborah J. Goodings, Chaun-Ping Lin, Richard D. Dick, William L. Fourney and Leonhard E. Bernold, AS Jan. 92, p44-58.

Modeling Nearshore Currents in the Vicinity of the Endicott Causeway, Alaska, Peter Hamilton, (Estuarine and

cott Causeway, Alaska, Peter Hamilton, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.227-239.

Modeling of a Large-Scale Water Distribution System, Nien-Sheng Hsu, Peter W. F. Louie and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1922, p598-603.

Monammad Karamouz, ed., 1992, p. 398-603.
Modeling Three-Dimensional Circulation and Sediment Transport in Lakes and Estuaries, Y. Peter Sheng, D. E. Eliason and X.-J. Chen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p105-113.

son, ed., 1992), p105-115.
A Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, Michael F. Sheridan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2033-2038.
A Multiple Presence Load Model for Bridges, Robert J. Heywood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p579-582.

382.
Noise Barrier Simulated by Rigid Screen with Back Wall, L. H. Huang and T. M. Kung, EM Jan. 92, p40-55.
A Non-Gaussian Fatigue Model for Offshore Structures, Jin Wang and Loren D. Lutes, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p463-466.

ed., 1992), p403-400.

Nowast Protocol for the Great Lakes Forecasting System, Chieh-Cheng J. Yen, Keith W. Bedford and David J. Schwab, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),

p140-148.

Numerical and Analytical Description of Highway Surface Roughness, Ton-Lo Wang, Mohsen Shahawy and Dongzhou Huang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p309-316.

Numerical Solution of the Transient Fokker-Planck Equation: The Movie, L. A. Bergman and B. F. Spen-cer, Jr., (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p519-522.

One-Dimensional River Flow Simulation with Particular Consideration of Ecology and Environment, E. Ritterbach, M. Schröder and G. Rouvé, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1142-1147.

Optimal Importance-Sampling Density Estimator, George L. Ang, Alfredo H-S. Ang and Wilson H. Tang, EM June 92, p1146-1163.

LM June 92, pl.146-1163.

A PC Modelling System for the Simulation of Transport and Fate of Solutes and Suspended Substances, A. Christina Ellegaard, Jesper Weiergang and Helmer M. Petersen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), pl.88-201.

p180-201.

Planning, Design and Integration of a Computerized Terminal Operating System, M. John Vickerman, (Ports '92, David Torseth, ed., 1992), p121-133.

Planning/Analysis of VPA's Norfolk North Terminal, Thomas Ward, Richard A. Woodman and Bernardo de Castilho, (Ports '92, David Torseth, ed., 1992), p134-

Probability Model of Load Exceedances under Cyclic Loadings, Karen C. Chou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p208-211.

Random Response of Multicrystalline Structures, Dariush Mirfendereski and Armen Der Kiureghian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p800-803.

Recursive Parameter Estimation for ARMA Simulations, Bingqi Miao, EM Dec. 92, p2484-2490.

Bingqi Miao, EM Dec. 92, p.2484-2490.
Rehabilitation of Coarrete Dams: Laboratory Simulation of Cracking and Injectability, G. Ballivy, K. Saleh, T. Mnif, J. Maniez, L. M. Landry and M. Nadeau, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625.
Relationships Between Error Estimation and Adaptive Computations in Strain Localization, D. Aubry and B. Tie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283.

Release Alternatives on a 3-D Salinity Simulation, Bernard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-

242. Reliability Analysis of Creep and Shrinkage Effects, C. Li and R. E. Meichers, ST Sept. 92, p2323-2337. Reliability of Operating Rules with or without Uncertain Forecasts, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p679-684. Reuse Simulation in Irrigated River Basin, L. K. Smedoma, W. Wolters and P. J. Hoogenboom, IR Nov./Dec. 92, p841-851.

92, p841-851.

A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p69-72.

Semi-Analytical Treatment of Fracture/Matrix Flow in Dual-Porosity Simulator for Unsaturated Fractured Rock Masses, R. W. Zimmerman and G. S. Bodvarson, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p727-275.

son, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.272-278.

Sensitivity Evaluation of Simulation Methods for Reliability Assessment, Bilal M. Ayyub and Chao-Yi Chia, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.240-249.

Ship Simulation of the Houston Ship Channel, Houston, Texas, Dennis W. Webb and J. Christopher Hewlett, (Ports '92, David Torseth, ed., 1992), p.898-911.

The SIMBAT Software Package for Stochastic Interpolation of Ocean Wave Kinematics as an Aid in the Engineering Design of Large Floating Structures, Leon Borgman, David Shields, Robert Zueck and Warren Bartel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p.585-606.

Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Semprini and Paul V. Roberts, EE Sept./Oct. 92, p.666-689.

Simulation of Improved Gaussian Time History, Loren D. Lutes and Jin Wang, EM Jan. 91, p.218-224.

Simulation of Nonlinear Wave Runup on Steep Impermeable Slopes, A. N. Williams, W. G. McDougal, S. Zhang and S. N. Stevenson, (Civil Engineering in the Caens V. Robert T. Hudspeth, ed., 1992), p.205-217.

Simulation-Based Excursion Statistics, Gordon A. Fenton and Erik H. Vanmarcke, EM June 92, p.1129-1145.

Slepian Process of a Non-stationary Process, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.292, 299.

A Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p25-52.
 Goodno, ed. and Jeff R. Wright, ed., 1992h, p25-52.
 Holly, J. Wright, ed., Indiana M. Holly, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p124-1129.
 Statistical Properties of Construction Data, Simaan M. Aboukix and Daniel W. Halpin, CO Sept. 92, p525-544.
 Stochastic Finite & Boundary Element Simulations, Gau-

ochastic Finite & Boundary Element Simulations, Gau-tam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123.

and Veotetana Remonthy, T. R. Lan, Car. Van. pl. 20-123.

Stochastic Time-Series Representation of Wave Data, Norman W. Scheffner and Leon E. Borgman, WW July/Aug. 92, p.337-351.

Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, Julio E. Pulido, Timothy L. Jacobs and Edison C. P. Lima, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.507-510.

Structural Reliability of Seismic Isolation System, Kazuta Hirata, Kenji Shirahama and Takahiro Somaki, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.57-60.

Surface Motion Due to Stochastic Plane Sources in a Layered Medium, Y. Yong and J. Yu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), pl84-187.

K. Lin, ed., 1992), p184-187.

Survey of and Classification Criteria for Most Commonly Used Groundwater Models, Lakshmi N. Reddi, C. Harold Emmett, Daniel E. Medina and R. Lee Peyton, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p575-580.

System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Raiph A. Wurde, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992, p.498-503.

Systems Analysis Applications at Hydrologic Engineering Center, Arlen D. Feldman, WR May/June 92, p249-

Tethers and Their Role in the Space Exploration Initia-tive, Cheryl D. Bankston, John A. Gilbert and Dennis R. Wingo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p897-908.

Thirty Year Simulation of Chesapeake Bay Eutrophica-tion, Carl F. Cerco and Thomas M. Cole, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajh Cheng, ed. and Craig Swanson, ed., 1992), p116-126.

G. and Craig SPAINOR, ed., 1992), p.110-126.
Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H.-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

Tripod Crane Concept for Lunar Surface Construction, Haruyuki Namba and Martin M. Mikulas, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295.

Munified Simulation Approach to Structural System Re-liability Analysis, Richard C. Turner and Michael J. Baker, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), p104-107.

Updating of Dynamic Structural Systems by Learning, Masaru Hoshiya, Yasuyoshi Obuchi and Shigeru Noda, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p124-127.

Use of Explosives on the Moon, Richard D. Dick, William L. Fourney, Deborah J. Goodings, Chaun-Ping Lin and Leonhard E. Bernold, AS Jan. 92, p59-69.

Use of Fractal Geometry Concepts in the Simulation of Ground Water Flow and Transport Processes, Angelos N. Findikakis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p33-

Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Ran-dall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jeunings, ed. and Nani G. Bhowmik, ed., 1992), p281-

200. Use of Interactive Simulation Environments for Evalua-tion of Water Supply Reliability, Larry M. Karpack and Richard N. Paimer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p144-149.

Use of Portable Simulator in Designing Channel Improvements for Port of Brownsville, Texas, Dennis Wayne Webb and Larry Leon Daggett, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614.

Using Simulation Software to Build Conceptual Models in Civil Engineering, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244.

Using Simulation to Evaluate On-Orbit Construction Op-erations, Todd C. Parfet, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2338-2350.

Muter, ed. and Russen J. Miller; ed., 1992), p. 230-2330.
Water-Rock Interaction in New Zealand Hydrothermal Systems: Comparison of Some Simulated and Ob-served Geochemical Processes, William E. Glassley and Bruce W. Christenson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.352-356.

Actuated Traffic Signal Control at Diamond Interchange, Kit M. Lum and Clyde E. Lee, TE May/June 92, p410-

Application of Monthly Model of Los Angeles Aqueduct System to Investigate Impacts from Mono Lake Tribu-tary Diversions, Russ T. Brown and William R. Hutchison, (Hydraulic Engineering: Saving a Threat-end Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1042-1048.

Application of Optimal Hydraulic Control to Ground-water Remediation, David Ahlfeld and Manoutch Heidari, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1243.

Application of the Sampling Theorem to the Representa-tion of Random Fields, Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p33-36.

Applying the ARMOS and MOFAT Models to a Major Oil Spill, Otto J. Helweg, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p585-590.

Are High and Low Flow Habitat Values Really the Same? Terry Waddle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p374-

Automatic Generation of Simulation Codes in Construc-tion, Ali Touran, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1050-1057.

Bulk Commodity Terminals—Planning for the Future Competitive and Environmental Challenges, Gordon W. Zonailo, (Ports '92, David Torseth, ed., 1992), p695-708.

Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, Raymond M. Wright, Igor Runge, Rajat Roy Chaudhury and Daniel W. Urish, (Water Resources Planning and Managemens: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467.

The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, Pankaj A. Arora and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p451-456.

Development of a Comprehensive Modeling System for Remediation of Contaminated Groundwater, Jeffery P. Holland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1178-1183.

Evaluating the Hydrologic Functions of Wetlands, Abiola A. Akanbi and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487.

Experimental Study of Underground Exploration by Auger Boring on a Mars Rover, Masaki Kojima, Kenji Saitou, Yutaka Kaneko and Nobuki Kawashima, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1922), p416-426.

Finite Element Modeling of Storm Water Runoff Using GRASS GIS, Baxter E. Vieux and James Westervelt, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p712-718.

Graphical Object-Oriented Simulation System for Construction Process Modeling, L. Y. Liu and P. G. Ioannou, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1139-1146.

Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.

The Importance of Verified Simulation Model in a Sewerage Rehabilitation Program, Phil Wildbore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammat Karamouz, ed., 1992), p730-735.

Aaramouz, ed., 1992, p. 190-135.
An Integrated Expert System for Operating a Petroleum Refinery Activated Sludge Process, Weibo Yuan, Michael K. Stenstrom, Naci H. Ozgur and David Okrent, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p480-485.

Knowledge-Based Simulation of Construction Plans, Abdalla M. Odeh, Iris D. Tommelein and Robert I. Carr, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1042-1049.

Jan. K. Wight, ed., 1992, pto 21092.

Launching Facility Constraints on the Space Exploration Initiative, Kadett Chan and Alex J. Montoya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2044-2055.

Eds. Scientific F. B.

Model for Pollutant Transport by Eddy Simulation, E. R. Holley, Y. C. Su, G. H. Ward and R. de Souza, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598.

Modeling Input Data for Construction Simulation, Simaan M. AbouRizk and Daniel W. Halpin, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1147-1154.

Wright, ed., 1972b, p1147-1135.
Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p952.

A Numerical Simulation Approach to Estimating Dispos-al Site Stability, Norman W. Scheffner, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1006-1011.

Optimization and Simulation of Multiple Reservoir Sys-tems, Mohammad Karamouz, Mark H. Houck and Jacque W. Delleur, WR Jan./Feb. 92, p71-81.

A PC-Based Discrete Event Simulation Model of the Civilian Radioactive Waste Management System, G. L. Airth, J. W. Nehls and D. S. Joy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), n1317-1325. Waste Man p1317-1323.

Planning Operations of Bulk Loading Terminals by Simu-lation, Lal C. Wadhwa, WW May/June 92, p300-315.

Planning Simulation Model of Irrigation District, Jesús Chávez-Morales, Miguel A. Mariño and Eduardo A. Holzapfel, IR Jan./Feb. 92, p74-87.

Proposed Development of South Central Florida Hydrologic Ecosystem Model, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p707-711.

Reservoir Operating Rules for Maximum Hydropower Production, Emmanuel U. Nzewi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p543-548.

Karamouz, ed., 1992), p543-548.
Reservoir System Reliability Constrained by Natural Salt Pollution, Ralph A. Wurbs and Awes S. Karama, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p661-666.
Simulating the Effects of Deficit Irrigation for Furrow Systems, J. M. Enciso, D. L. Martin, D. E. Eisenhauer and N. L. Klocke, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p244-249.

simulation of Reservoir Operation Using Smart Reservoirs, Jon S. Behrens, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p606-613.

Simulation of Runoff and Infiltration of Disturbed Land, Ben Chie Yen and Robert Riggins, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p401-406.

Stochastic Modelling of Strong Ground Motions for the Istanbul, Turkey Area from Seismic Data for the Surrounding Region, Kirsten L. Findell and Ahmet S. Cakmak, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-271

Stochastic Simulation of Climate Input for Water Supply Forecasting, Roy W. Koch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p557-562.

TDHNET, Walter Grayman, CC Feb. 92, p1,4-5.

Use of Interactive Simulation Environments for the Development of Negotiation Tools, Allison M. Keyes and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p68-73.

## Sinkholes

A Design Theory for Compaction Grouting, John H. Schmertmann and James F. Henry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p215-228

Zishinkholes in Dams of Coarse, Broadly Graded Soils (Paper introduced by Jean Lafleur), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p312-323.
 Stabilizing Drop Structure by Drainage Modifications, Larry D. Armer, (Irrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman, ed., 1992), p39-44.

Access Control to Projects Via Raised Islands, Justin F. Farmer, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p77-81.

and T. C. Sutaria, ed., 1992), p77-81.

Analyzing Fast-Food Drive-Up Window Site Impacts, J. L. Gattis, N. Zaman, G. W. Tauxe and R. S. Marshment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20.

Computerized Transportation Planning Models for Site Impact Analysis: Precision or Complexity? Edward A. Mierzejewski and Timothy Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p128-132.

A Decision Analysis of an Exploratory Studies Escility

A Decision Analysis of an Exploratory Studies Facility, M. W. Merkhofer and P. Gnirk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Waste N p650-656.

po30-030.

Developing Conceptual Models for Performance Assessment of Waste Management Sites, Felicia A. Kerl, A. Sharif Heger and David P. Gallegos, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e502-503. p502-509.

Development Impact Assessment with Transportation Models, John Loper and Robert C. Hazlett, Jr., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p233-237.

Sutaria, ed., 1992), p233-237.
Early Evaluation of the Suitability of the Yucca Mountain Site, Jean L. Younker, Larry D. Rickertsen and Bruce R. Judd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p517-524.

Excavations and Contamination, Bryan P. Sweeney and Joel S. Mooney, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p.26-45.

man, ed., 1976, p.26-45.

GEIS: A Geographic Information System for the Earth
Sciences, Robert D. Regan, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p833-838.

Geotechnical Investigation Strategies for Lunar Base,
Dan A. Brown and Glenn Rix, AS Apr. 92, p199-213.

A Guideline for Determining Minimum Threshold Requiring Traffic Impact Studies, Anthony A. Saka, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6-10.

Guidelines for Rehabilitation of Civil Works of Hydrousdelines for Rehabilitation of Civil works of Hydro-electric Plants, Format: unbound, three-hole punched, Task Committee for the Preparation of Guidelines for Rehabilitation of Civil Works of Hydroelectric Plants, Hydropower Committee, American Society of Civil Engineers, (Ashok K. Rajpal, chmn.), 1992, 0-87262-885-2, 247pp.

889-2, 247pp.
Hotel-Casino Trip Generation Analysis Using GIS, Reginald R. Souleyrette, Shashi K. Sathisan and Emelinda M. Parentela, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p52-56.
ICU—A Method of Analyzing Signalized Intersections, Weston S. Pringle and Robert W. Crommelin, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p56-31.
In-Service Durability Evaluation of Armourstone, John-Paul Latham, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p6-18.
Introductory Remarks for the International High-Level

Baird, ed., 1972, pp-18.

Introductory Remarks for the International High-Level Radioactive Waste Conference Technical Session on Site Chracterization: Approaches, Concepts, Concerns', Philip S. Justus and Jane R. Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p746-747.

1992), p746-747.
Laboratory Testing of Stone for Rubble Mound Breakwaters: An Evaluation, David A. Lienhart, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p19-33.
The New Munich Airport—Planning, Construction and Opening of a New International Turnstile Airport in Europe, Willi Hermsen, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p148-154.
A Numerical Simulation Aregoneth to Estimating Dispose.

1992, p146-134.
A Numerical Simulation Approach to Estimating Disposal Site Stability, Norman W. Scheffner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1006-1011.

Quantification of Uncertain Outcomes from Site Charac-terization: Insights from the ESF-AS, William J. Boyl-David K. Parrish and Phillip C. Beccue, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

uantifying Uncertainty in Site Characterization, Wil-liam J. Boyle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

and Geotechnical Reliability, Y. K. Lin, ed., 1992), p216-219.

RCC Dam Design Concepts Versus Construction Conditions for Stagecoach Dam, Terrence E. Arnold and Daniel L. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p291-307.

cassessing the Risk Assessment, Wayne K. Tusa, CE Mar. 92, p46-48.

Seismic Hazard Along a Central U.S. Oil Pipeline, Howard H. M. Hwang, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p110-124.

ed., 1992), p110-124.
Shouldn't i be Transportation Impact Assessment? Kenneth E. Dallmeyer, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p133-137.
Site Characterization and the Method of Multiple Worting Hypotheses, David F. Fenster, K. Michael Cline, John A. Blair and Jane Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), arXiv:741.748. Waste M p751-754.

p751-754.

Site Impact Analysis Using the Tranplan Computer Model, Robert B. Hearn and L. P. Ledet, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p82-83.

Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, 0-87262-870-1, 236pp.

Site Traffic Impact Analysis Process: The Developer's Perspective, Kenneth O. Voorhies, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p205-210.

Solid Waste Travel Demand Model Using GIS and Simulation for Evaluating Site Impacts, Erin K. Bashaw and P. A. Koushki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed. Nigal Rouphail, ed. and T. C. Sutaria, ed., 1992), pl 85-189. Start-Ups, CE Jan. 92, p11.

The Status of Yucca Mountain Site Characterization Activities, Carl P. Gertz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p748-750.

Summary of the Exploratory Studies Facility Alternatives Study, L. S. Costin, A. W. Dennis and A. L. Stevens, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p643-649.

Three Dimensional Visualization in Support of Yucca Mountain Site Characterization Activities, David W. Brickey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p458-461.

Traffic Impact Assessment for Snow Disposal Facilities—Extended Abstract, John P. Braaksma, Ian Lockwood and Juan Salinas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p175-179.

Traffic Impact Studies for Marriott Corporation Interna-tional Headquarters, S. Sabanayagam and Edward Y. Papazian, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p148-153.

Traffic Impact Study Ingredients, Peter A. Terry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p217-222.

Using Computer Models in Site Impact Assessment, James G. Douglas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p123-127.

sing Traffic Network Models to Assess Site Impact Traffic, Steven B. Colman and Michael N. Aronson, (Site Impact Traffic Assessment: Problems and Solu-tions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p118-122.

Yucca Mountain Digital Database, Carl R. Daudt, Char-lotte Abrams and William J. Hinze, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p442-449.

Analysis of Uncertainty in Geotechnical Site Investiga-tions, and Why, Milton E. Harr, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Constructability for Drilled Shafts, John P. Turner, CO Mar. 92, p77-93.

A Decision Analysis of an Exploratory Studies Facility, M. W. Merkhofer and P. Gnirk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p650-656.

Deterministic Geologic Processes and Stochastic Modeling, Christopher A. Rautman and Alan L. Flint, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p1617-1624.

The Flow to Licensing: Technical Data Tracking and the Licensing Support System (LSS), Jan Statler, (High Level Radioactive Waste Management, High Level Radioactive: Waste Management Program Committee, 1992), p2088-2092.

1992, p.2005-2009.
Geoelectrical Tomography: Model Studies Related to Nuclear Waste Site Characterization, Thomas E. Owen and Vernon R. Sturdivant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.304-307.

1992), p304-307.
High Resolution Seismic Imaging for Characterizing Fractures in Potential Sites for Nuclear Waste Repositories, Ernest Majer, Larry Myer, John Peterson and Jung Mo Lee, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p111-1121.

Just Call Them Superfund-Busters, CE Sept. 92, p11.

Management of Scientific and Engineering Data Collected During Site Characterization of a Potential High-Level Waste Repository, Claudia M. Newbury and Gail W. Heitland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2092-2097.

Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, Gary W. Smith, Charles H. Evans, III. and Michael A. Knott, (Ports '92, David Torseth, ed., 1992), p630-643.

'Odd Couple' Techniques Aid Site Assessment, CE May 92, p22,26.

Old Problems and New Challenges in Marine Geotechni-cal Engineering, Wayne A. Dunlap, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992),

p1188-1195

Quantifying Uncertainty in Site Characterization, William J. Boyle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p216-219.

Resolving Contract Disputes Based on Misrepresenta-tions, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487.

Martin Fonderick, O. Sept. 92, pp. 72, pp. 72,

Summary of the Exploratory Studies Facility Alternatives Study, L. S. Costin, A. W. Dennis and A. L. Stevens, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p643-649.

Traffic Data Collection: What Really Needs to be Done?
A. S. Narasimha Murthy, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p1-5.

Visualization of Groundwater Contaminant Parameters, Gregory D. Comes, James Warner and S. Paul Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1177.

Warks the Social Harford (This Line)

X Marks the Spot at Hanford, CE July 92, p11.

The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, Nona F. Shepard and Donald L. Cham-pagne, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p593-599

Site preparation, construction

Sate preparation, construction: From Subdivision Design to Dwelling Unit, M. G. Syal, C. McIntyre and J. H. Willenbrock, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p207-213.

Dynamic Compaction Engineering Considerations, Robert G. Lukas, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p940-953.

Site Improvement for a Steel Mill Complex, Eun C. Shin, Bang W. Shin and Braja M. Das, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-

Site-Layout Modeling: How Can Artificial Intelligence Help? I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Sept. 92, p594-611.

The Airport Traffic Control Tower for the New Denver International Airport, Jon Ikeda and Hans Conradt, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257.

Assessing Lunar Resources with Remote Sensing, Sandra C. Feldman and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

A Bayesian Reliability Approach to the Performance Assessment of a Geological Waste Repository, John A. Flucek and Ashok K. Singh, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1625-1632.

Can the Kristallin-I Near-Field Model be Considered Robust? I. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1770-1776.

City and County of Denver Approach to Moreover.

City and County of Denver Approach to Management Requirements, Ginger S. Evans, (International Air Transportation: A New International Airport, Robert E.

Transportation: A New International Airport, Kobert E. Boyer, ed., 1992, pl 64-169.
Considerations in Managing the Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. W. Dormuth, P. A. Gillespie and S. H. Whitaker, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1737-1742.

Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p355-

Design of Municipal Wastewater Treatment Plants, 2 vols (M&R No. 76), Joint Task Force of the American Society of Civil Engineers and the Water Environment Federation, (Joseph F. Lagnese, chmn.), 1991, 0-87262-834-5, 1632pp.

834-3, 1032pp.
Fault Stress Analysis for the Yucca Mountain Site Characterization Project, S. J. Bauer, M. P. Hardy, R. Goodrich and M. Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277.

Flow and Transport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, In Che Yang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Trogram Committee, 1992), p732-737.

gram Committee, 1992), p. 132-131.

A Forecasting Model of Gaming Revenues in Clark County, Nevada, B. Edwards, A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 243-248. p943-948.

Graphics-Based Site Information Management at Han-ford TRU Burial Grounds, Samuel R. Rod, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p450-457.

ps 30-437.
The Implications of Episodic Nonequilibrium Fracture-Matrix Flow on Site Suitability and Total System Performance, John J. Nitao, Thomas A. Buscheck and Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p279-296.

The Importance of the Site for the Safety of a Repository for Spent Nuclear Fuel in Sweden, Tonis Papp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2136-2144.

1992, p2130-2149.
The Initial Exploration of Mars: Rationale for a Return Mission to Chryse Planitia and the Viking 1 Lander, Robert A. Craddock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1488-1499.

Mandated Public Participation in Siting of Hazardous and Conventional Waste Facilities: The Illinois Experience, Rabel J. Burdge, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1909-1916.

Model and Calculations for Net Infiltration, Stuart W.

Model and Calculations for Net Infiltration, Stuart W. Childs and Austin Long, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1633-1642. Needed Geologic and Seismic Rulemaking for HLW Repositories, Jay L. Smith, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p685-690. Negotiating the Voluntary Siting of Nuclear Waste Facilities—An Impossible Mission Made Possible, Robert M. Mussler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1565-1566.

A New Methodology for Repository Site Suitability Eval-uation, Ian Miller, Richard Kossik and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p494-501.

minee, 1993, pa94-501.
Preclosure Seismic Hazards and Their Impact on Site Suitability of Yucca Mountain, Nevada, J. Duane Gibson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1151-1158.

Bentletore, Constitution of the Program Committee, 1992, p1151-1158.

mittee, 1992), p1151-1158.

Regulatory Considerations in Design of the Exploratory Studies Facility, Michael W. Parsons and Michael D. Voegele, (High Level Radioactive Waste Management), High Level Radioactive Waste Management Program Committee, 1992), p671-678. Science and Students: Yucca Mountain Project's Educational Outreach and Public Tour Programs, April Van-Camp Gil, Paula Austin, Erin L. Larkin and Effie Harle, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1819-1825.

System Concepts for a Series of Lunar Ontical Tele-

System Concepts for a Series of Lunar Optical Tele-scopes, Max E. Nein, Billy G. Davis and John D. Hil-chey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831.

Technical Auditors: A Positive Learning Experience, James V. Voigt, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), pl 298-1302.

Wetland Restoration and Creation Guidelines for Mitiga-tion, Mary C. Landin, E. A. Dardeau, Jr. and Jerry L. Miller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p439-444.

Wetted-Region Structure in Horizontal Unsaturated Fractures: Water Entry Through the Surrounding Porous Matrix, R. J. Glass and D. L. Norton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 212 724 p717-726.

Site selection studies

Applications of Performance Assessment in Support of the Exploratory Studies Facility (ESF) Design, M. E. Fewell, S. R. Sobolik, J. H. Gauthier, L. E. Shephard and L. S. Costini, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670.

Introductory Remarks for the International High-Level Radioactive Waste Conference Technical Session on Site Chracterization: Approaches, Concepts, Concerns', Philip S. Justus and Jane R. Stockey, (High Level Radioactive Waste Management Program Committee, 1992), p746-747.

Quantification of Uncertain Outcomes from Site Chaper.

1772), pr40-147.
Quantification of Uncertain Outcomes from Site Characterization: Insights from the ESF-AS, William J. Boyle, David K. Parrish and Phillip C. Beccue, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p657-664.

The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, Nona F. Shepard and Donald L. Cham-pagne, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p593-599.

Jet Grouting for a Self-standing Wall, Gohichi Miyasaka, Yutaka Sasaki, Toshiaki Nagata, Mitsuhiro Shibazaki, Masahiro Iji and Masami Yoda, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p144-

Jet Grouting in Airport Construction, Yoshiomi Ichihashi, Mitsuhiro Shibazaki, Hiroaki Kubo, Masahiro Iji and Akira Mori, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193.
Site Mapping with 3DTM, Michael Lorezak, CC May 92,

Mean Size Distribution of Bed Load on Goodwin Creek, Roger A. Kuhnle and Joe C. Willis, HY Oct. 92, p1443-1446.

Water-Level Control in Hydropower Plants, Oscar F. Jiménez and M. Hanif Chaudhry, EY Dec. 92, p180-

Size effect
Aggradation-Degradation Process in Alluvial Channels,
Chin-lien Yen, Shou-young Chang and Hong-Yuan Lee,
HY Dec. 29, p1651-1669.

Granular Flows, Thomas G.

HY Dec. 92, p1651-1669.

Computer Simulation of Granular Flows, Thomas G. Drake, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p752-755.

Corrosion Cracking in Relation to Bar Diameter, Cover, and Concrete Quality, Rasheeduzzafar, S. S. Al-Saadoun and A. S. Al-Cahtani, MT Nov. 92, p327-342.

Saadoun and A. S. Al-Gahtani, MT Nov. 92, p.327-342. Experimental Determination of the Relation Between the Damaged Zone and the Aggregate Size in Concrete Through Acoustic and Mechanical Techniques, D. Fokwa, Y. Berthaud and D. Breysse, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), pl.31-134.

FEM Modeling of Fictitious Crack Propagation in Concrete, Walter H. Gerstle and Ming Xie, EM Feb. 92, p416-434.

p416-434.
Fracture Mechanics and Size Effect of Concrete in Tension, Tianxi Tang, Surendra P. Shah and Chengsheng Ouyang, ST Nov. 92, p3169-3185.
Structural Studies of Two Aerobrake Heatshield Panel Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932.

Skew bridges
Live-Load Moments for Continuous Skew Bridges,
Mohammad A. Khaleel and Rafik Y. Itani, ST Sept. 90,
p2361-2373.

Skewed structures

Buckling of Skew Plates and Corner Condition for Simply Supported Edges, C. M. Wang, K. M. Liew and W. A. M. Alwis, EM Apr. 92, p651-662.

Confidence Interval for Design Floods with Estimated Skew Coefficient, Jahir Uddin Chowdhury and Jery R. Stedinger, HY July 91, p811-831.

Separation of Skewness: Reality or Regional Artifact? Fahim Ashkar, Bernard Bobbe and Jacques Bernier, HY Mar. 92, p460-475.

Skin High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheinman, EM May 92, p1026-1043.

Design of Socketed Drilled Shafts in Limestone, M. C. McVay, F. C. Townsend and R. C. Williams, GT Oct. 92, p1626-1637.

92, p10.20-1031.
Passive Inclined Anchorages in Sand, James D. Geddes and E. J. Murray, GT May 91, p810-814.
Skin Friction Distributions on Piles in Sand, Nazzul I. Khan, John S. Templeton, III. and Michael W. O'Neill, (Civil Engineering in the Oceans V, Robert T. Hudsperk, ed., 1932), p783-797.

Slabs
Analysis and Design of Doweled Slab-on-Grade Pavement Systems, Anastasios M. Ioannides and George T.
Korovesis, TE Nov./Dec. 92, p745-768.
Concrete Deterioration, East Los Angeles County Area:
Case Study, Gregory F. Rzonca, Robert M. Pride and
Dean Colin, CF Feb. 90, p24-29.
Force on Slab Beneath Hydraulic Jump, Javad Farhoudi
and Rangsawami Narayanan, HY Jan. 91, p64-82.
In-Plane Floor Deformations in RC Structures, Hassan S.
Saffarini and Musa M. Qudaimat, ST Nov. 92, p30893102.
Modeline Slab Contribution in Ferame Connections B. M.
Modeline Slab Contribution in Ferame Connections B. M.

Modeling Slab Contribution in Frame Connections, B. M. Shahrooz, S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494.

Recent European Developments in Constructing Grouted Slabs, Norbert Tausch, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p301-312.

Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079.

Strength of Composite Slabs, W. Samuel Easterling and Craig S. Young, ST Sept. 92, p2370-2389.

Wheel Load Distribution in I-Girder Highway Bridges, Kassim M. Tarhini and Gerald R. Frederick, ST May 92, p1285-1294.

92, p1285-1294.

Surability Failure of a Concrete Block Port Pavement, Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p1-15.

Electric Arc Furnace (EAF) Slag as an Aggregate in Asphalt Concrete, Kit M. Lum, Yiik-Diew Wong and Soo-Loi See, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p240-249.

Some Waste Materials in Road Construction, Salem D. Ramaswamy and Mohammed A. Aziz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p153-165.

The Use of Phosphogypsum-Based Slag Aggregate in Hot Mix Asphaltic Concrete, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p202-216.

Stides
Fast-Track Slide Fix, CE Dec. 92, p19-20.
Slide Stabilization with Stone-Fill Trenches, George L.
Sills and Robert L. Fleming, Ir., (Stability and Performance of Slopes and Embankments II., Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1382-1394.
Submarine Flow Slide in Puget Sound, Leland M. Kraft, Jr., Thomas M. Gavin and Jon C. Bruton, GT Oct. 92, p1577-1591.

Jr., Thomas M. Gavin and Jon C. Bruton, GT Oct. 92, p1577-1591.

Sliding
Actively Controlled P-F Based Sliding Structures, Sohail M. Qureshi, Kiyoshi Uno and Hajime Tsutsumi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p324-327.

Dynamic Analysis of Sliding Seismic Isolators, Navinchandra Amin, Anoop Mokha, Stanley Low and Victor Zayas, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p320-323.

Effect of Footing Shape on Behavior of Cantilever Retaining Wall, John S. Horvath, GT June 91, p973-978.

Elastoplastic Deformation for Particulates with Frictional Contacts, Ching S. Chang, Anil Misra and Kofi Acheampong, EM Aug. 92, p1692-1707.

Exact Nonstationary Response of a Sliding Rigid Structure to a Modulated White Noise Base Excitation, Marc P. Mignolet and Guangwuu W. Fan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p408-411.

Frictional Aspect of Rocking-Sliding of a Rigid Block with Surface Impact, Majid Shekarian, Joel P. Conte and Pol D. Spanos, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-331.

Micromechanics Modeling for Stress-Strain Behavior of Micromec

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. I: Theory, Ching S. Chang, Yang Chang and Mohammed G. Kabir, GT Dec. 92, p1959-

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, Ching S. Chang, Mo-hammed G. Kabir and Yang Chang, GT Dec. 92, p1975-1992.

p1975-1992.
Multiple Modes of Steady-State Slide-Rock Response, Harry W. Shenton, III. and Nicholas P. Jones, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p312-315.
Probabilistic Characteristics of a Sliding Structure Via New Stochastic Linearization Methods, Ruichong Zhang, Isaac Elishakoff and Masanobu Shinozuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p196-199.
Stochastic Response of a Caster-Mounted System, Michael A. Moser and Wilfred D. Iwan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p316-319.

Slip Analysis of Internal Discontinuities in Geo-Materials, Dunja Perić, Stein Sture and Kenneth Runesson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p292-295.
Composite Beams with Partial Interaction under Sustained Loads, Mark Andrew Bradford and R. Ian Gilbert, ST July 92, p1871-1883.

Cracking Response of RC Members Subjected to Uniaxial Tension, Gaetano Russo and Filippo Romano, ST May 92, p1172-1190.
Fiber Pullout and Bond Slip. I: Analytical Study, Antoine E. Naaman, George G. Namur, Jamil M. Alwan and Husam S. Najm, ST Sept. 91, p2769-2790.
Hysteretic Behavior of Anchorage Slip in R/C Members, Murat Saatcioglu, Jaber M. Alsiwat and Guney Ozcebe, ST Sept. 92, p2439-2458.
Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, Ali M. Hamza and Antoine E. Naaman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p996-999.
Modeling Load-Slip Behavior of Nailed Joints, Ruy A. Sa Ribeiro and Patrick J. Pellicane, MT Nov. 92, p385-398.

398. Reinforcement Anchorage Slip under Monotonic Loading, Jaber M. Alsiwat and Murat Saatcioglu, ST Sept. 92, p2421-2438.
Slip Velocity and Temperature Jump in Flow over Rough Surface, J. B. Zhang and V. H. Chu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p604-607.

Slip surface Slope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867.

slope stability

ope statuting polication of Centrifuge Modeling Technique to Slopes and Embankments, Dobroslav Znidarcic, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p521-

537.

Availability of Shear Strength Reduction Technique, Tamotsu Matsui and Ka-Ching San, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p445-460.

A Benchmark Slope Stability Study, Jose L. M. Clemente, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,

1992), p1520.

Biotechnical Stabilization of Highway Cut Slope, Donald H. Gray and Robbin B. Sotir, GT Sept. 92, p1395-

H. Gray and Robbin B. Sotir, GT Sept. 92, p13951409.

Case History Evaluating Field Vane Correction Factors,
W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani
and Henry T. Taylor, (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p737-755.

Cause and Mechanism of Failure Kettleman Hills Land
fill B-19, Phase IA, R. John Byrne, J. Kendall and S.
Brown, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p1188-1215.

Comparison of Rigorous Slope Stability Methods: Statical Aspects, Dov Leshchinsky, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed,
ed. and Ross W. Boulanger, ed., 1992), p1070.

Conditions for Initiation of Rainfall-Induced Debris
Flows, Nicholas Sitar, Scott A. Anderson and Kenneth
A. Johnson, (Stability and Performance of Slopes and
Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p834-849.

A Design Method for Reinforced Clay Embankments on
Soft Foundations, Gien A. Roycroft, (Stability and Performance of Slopes and Embankments II, Raymond B.
Seed, ed. and Ross W. Boulanger, ed., 1992), p14811492.

Design of Geosynthetic Reinforced Soil Structure Extended.

Design of Geosynthetic-Reinforced Soil Structures, Kh

Lesign of Geosynthetic-Reinforced Soil Structures, Kh. Farrag and I. Juran, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. 1188-1200. The Design of Landfill Slopes, Ibraheem Alshunnar, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.1232-1243.

1992), p1232-1243.
Discontinuous Deformation Slope Stability Analyses, An-Bin Huang and Max Y. Ma, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p479-492.
Discrete Element Method for Slope Stability Analysis, Ching S. Chang, GT Dec. 92, p1889-1905.
An Embankment on Soft Clay With an Adjacent Cut, Walter Steiner, Richard Metzger and W. Allen Marr, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720.

Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov./Dec. 92, p848-864. Evaluation of Failure Potential in Mudstone Slopes Using Fuzzy Sets, Der-Her Lee and C. Huein Juang, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1137-1151.

p1137-1151.

The Evaluation of Slope Stability—A 25 Year Perspective, Norbert R. Morgenstern, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed. 1992), p1-26.

Evaluation of Soil Properties for Seismic Stability Analyses of Slopes, Geoffrey R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p16-142.

FE Analysis of Time-Dependent Instability of Cut Slopes in Clay Shale, Nobuyuki Yoshida and Toshihisa Adachi, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p429-444.

Fill-Slope Failure and Repair, Robert W. Day, CF Aug. 92, p161-168.

92, p161-168. Finite Element Analysis of Slopes with Layer Reinforcement, Robert M. Ebeling, John F. Peters and Reed L. Mosher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1427-1443. Generalized Slope Stability Analysis: Interpretation, Modification, and Comparison, Dov Leshchinsky and Ching-Chuan Huang, GT Oct. 92, p159-1576. Generalized Three-Dimensional Slope-Stability Analysis, Dov Leshchinsky and Ching-Chuan Huang, GT Nov. 92, p1748-1764.

92, p1748-1764.

Geosynthetic Reinforced Soil Structures, Dov Leshchinsky and Ralph H. Boedeker, GT Oct. 89, p1459-1478.

Influence of Seepage on Stability of Sandy Slope, C. van Rhee and A. Bezuijen, GT Aug. 92, p1236-1240.

Instability of Slopes with Nonassociated Flow, Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p288-291.

Interactive Slope Analysis Using Spencer's Method, Sunil Sharma and Abdul Moudud, (Stability and Performance of Slopes and Embankments If, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p506-520.

Intersitice Force Functions for Limit Equilibrium Analysis

ance of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p506-520. 
Interslice Force Functions for Limit Equilibrium Analysis, Harianto Rahardjo, Delwyn G. Fredlund and Ken K. Fan, (Stability and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p325-341. 
Kettleman Hills Waste Landfill Slope Failure. I: Liner-System Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668. 
Landslide Hazard Analysis for Pipeline Design, Northeast Utah, Jeffrey R. Keaton, Robert M. Robison and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204. 
Mapping Slope Failure Potential Using Fuzzy Sets, C. H. Juang, D. H. Lee and C. Sheu, GT Mar. 92, p475-494. 
Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports '92, David Torseth, ed., 1992), p376-389. 
Mechanism of a Landslide Caused by Rainfall, Masami Fukuoka, (Stability and Performance of Slopes and Embankments II.

Mechanism of a Landalide Caused by Rainfall, Masami Fukuoka, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p342-357.
A Method for Estimating the In Situ Cohesion of Cemented Conglomerate, Edward A. Nowatzki and David Kidd, (Sitability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p158-174.
Pelton Landslide: An Unusual Double-Wedge Failure, Derek H. Cornforth and D. Andrew Vessely, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p310-324.

mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p310-324.
Pile Driving: Can it Cause Slope Movement? D. G. Anderson, R. E. Riker and B. P. Erickson, (Ports '92, David Torseth, ed., 1992), p350-363.
Post-Earthquake Slope Stability of Two Dams with Liquefied Gravel Foundations, D. W. Sykora, J. P. Koester, R. E. Wahl and M. E. Hynes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005.

Probabilistic Analysis of Groundwater Levels in Hillside Slopes, Lakshmi N. Reddi and Tien H. Wu, GT June 91, p872-890.

Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p491-505

Reliability and Probability in Stability Analysis, John T. Christian, Charles C. Ladd and Gregory B. Baecher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1071-1111.

1992), p1071-1111.
The Role of Benchmark Problems in Slope Stability Computations, Stephen G. Wright, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1067-1069.
The Role of Engineering Geology in Slope and Embankment Stability Analysis, Richard W. Galster, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), n70-94.

p7/0-94.
Seismic Response of Landfill Slopes, D. G. Anderson, B. Hushmand and G. R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p973-989.
Seismic Stability Analysis of Landfill, Max Y. Ma, Albert T. Yeung and An-Bin Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724.
Seismic Stability and Permanent Deformation, Analyses:

Seismic Stability and Permanent Deformation Analyses: the Last Twenty Five Years, W. F. Marcuson, III., M. E. Hynes and A. G. Franklin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p552-592.

ed. and Ross W. Boulanger, ed., 1992), p532-992. Site Qualification for Inclinometer Surveyag Using Tiltmeters, Howard Egan, Gary R. Holzhausen and Dan Sampson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551. Silde Stabilization with Stone-Fill Trenches, George L. Sills and Robert L. Fleming, Ir., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1382-1394. Slope Disinflements from Pile Driving Richard E. Biker.

Slope Displacement from Pile Driving, Richard E. Riker, Donald G. Anderson and D. Dexter Bacon, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992.) p292-309.

Slope Remediation, Manfred R. Hausmann, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1274-1317.

Slope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867. Softening of Fill Slopes Due to Moisture Infiltration, Robert W. Day and Gregory W. Axten, GT Sept. 90, p1424-1427.

Soil Strengths from Back Analysis of Slope Failures, J. Michael Duncan and Timothy D. Stark, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p890-

Stability Analysis in Geomechanics by Linear Program-ming. II: Application, Poon-Hwei Chuang, GT Nov. 92, p1716-1726.

Stability Analysis in Geomechanics by Linear Programming. I: Formulation, Poon-Hwei Chuang, GT Nov. 92, p1696-1715.

92, p1696-1715.
Stability Analysis of an Earth Slope, T. William Lambe and Francisco Silva-Tulla, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p27-69.
Stability and Closure Design for a Landfill on Soft Clay and Peat, Richard A. Mitchell, Sybil E. Hatch and Ronald A. Siegel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p685-704.
Stability and Performance of Slopes and Embankments II.

Stability and Performance of Slopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, 0-87262-872-8, 1574pp.

Stability Evaluation of Waste Landfills, Richard A. Mitchell and James K. Mitchell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1152-1187.

Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1050-1065.
State-of-the-Art: Static Stability and Deformation Analysis, J. Michael Duncan, (Stability and Performation B. Seed, ed. and Ross W. Boulanger, ed., 1992), p222-266.
Static Instability and Liquefaction of Loose Fine Sandy Slopes, Poul V. Lade, GT Jan. 92, p51-71.
Strength Correlation Factor for Residual Soils, N. Lo-Strength Correlation Factor for Residual Soils, N. Lo-

Strength Correlation Factor for Residual Soils, N. Loganathan, Suraj de Silva and A. Thurairajah, GT Apr. 92, p593-610.

Strength Parameters for Cut Slope Stability in "Marine' Sediments, J. L. M. Clemente, (Stability and Perform ance of Slopes and Embankments II, Raymond B. Seed ed. and Ross W. Boulanger, ed., 1992), p865-875.

ed. and Ross W. Boulanger, ed., 1992, pao5-87.

A Study of Slope Stability Analysis, R. J. Deschamps and G. A. Leonards, (Slability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.267-291.

Submarine Flow Slide in Puget Sound, Leland M. Kraft, Jr., Thomas M. Gavin and Jon C. Bruton, GT Oct. 92,

Threatened Levees on Sherman Island, Roger Foott, Richard Sisson and Roy Bell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p756-774.

Underwater Slope Failure, Port Hueneme, W. H. Roth, D. T. Liu, M. Tischuk and T. Hjort, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p940-955.

Seed, ed. and Ross w. Boluanger, ed., 1992), p940-953.
Undrained Analysis of Slopes Based on Effective Stress
Methods, John F. Peters, Chris L. Saucier and Oswald
Rendon-Herrero, (Stability and Performance of Slopes
and Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p493-505.

Undrained Shear Strength of Liquefied Sands for Stability Analysis, Timothy D. Stark and Gholamreza Mesri, GT Nov. 92, p1727-1747.

Use of Drilled Shafts in Stabilizing a Slope, Lymon C. Reese, Shin-Tower Wang and Jeffrey L. Fouse, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332.

Use of Shi's Discontinuous Deformation Analysis on Rock Slope Problems, Man-chu Ronald Yeung and Richard E. Goodman, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p461-478.

UTEXAS3 Example Problems, Earl V. Edris, Jr. and Dale F. Munger, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066.

Utilization of Economical Slopes for Jordanelle Dam, John A. Wilson, William O. Engemoen, Francis G. McLean and Perry J. Hensley, (Stability and Perform-ance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653-668.

Zunil 1 Landslide and Landslide Hazard, Gerald R. Thiers, Alan Benfer, Luis Merida and Richard Grass, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p205-221.

Application of Centrifuge Modeling Technique to Slopes and Embankments, Dobroslav Znidarcic, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p521-537.

Centrifugal Modeling of Drains for Slope Stabilization, Gregory S. Resnick and Dobroslav Znidarčić, GT Nov. 90, p1607-1624.

Design of Anchored Geosynthetic Systems for Slope Sta-bilization, Roman D. Hryciw and Kamarudin Haji-Ahmad, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1464-1480.

Fast-Track Slide Fix, CE Dec. 92, p19-20.

Jet Grouting in Contaminated Soils, Herff N. Gazaway and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p206-214.

Slope Stabilization at the Forks of Butte Project, Stephen J. Klein and David K. Hughes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p905-922.

co. and ross w. Boulanger, ed., 1992, ppo. 922.

Stope Stabilization Using In-Situ Earth Reinforcements,
Seth L. Pearlman, Bradley D. Campbell and James L.
Withiam, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p1333-1348.

Bousanger, ed., 1992), p1333-1348.
Two New Specialty Geotechnical Processes for Slope Stabilization, Donald A. Bruce, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1505-1519.
Tying Back a Landslide, Stephen J. Klein, CE Dec. 92, p40-43.

Wall System Makes the Cut, CE Dec. 92, p88.

Slopes

Bed-Load Transport on Transverse Slope. I, Masato Sek-ine and Gary Parker, HY Apr. 92, p513-535.

Storm Caused by Wetting, Iraj

ne and Gary Farker, HY Apr. 92, p513-535.

Deformation of Fill Slopes Caused by Wetting, Iraj Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257.

pl 24+127.

Design and Performance of Bath County Upper Dam and Reservoir Slopes, K. L. Wong, D. E. Kleiner, A. M. Wood, M. C. Geary and R. G. Oechsel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p371-362.

Design of Anchored Geosynthetic Systems for Slope Sta-bilization, Roman D. Hryciw and Kamarudin Haji-Ahmad, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1464-1480.

Evaluation of Failure Potential in Mudstone Slopes Using Fuzzy Sets, Der-Her Lee and C. Hsein Juang, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p1137-1151

Generalized Slope Stability Analysis: Interpretation, Modification, and Comparison, Dov Leshchinsky and Ching-Chuan Huang, GT Oct. 92, p1559-1576.

Generalized Three-Dimensional Slope-Stability Analysis, Dov Leshchinsky and Ching-Chuan Huang, GT Nov. 92, p1748-1764.

Hyperconcentrated Sand-Water Mixture Flows over Ero-dible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1525.

Lateral Analysis of Piers Constructed on Slopes, Moham-med A. Gabr and Roy H. Borden, GT Dec. 90, p1831-

Movement of Slopes During Rapid and Slow Drawdown, Ronaldo I. Borja and Sunil S. Kishnani, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p404-

On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p95-115.

Probabilistic Analysis of Groundwater Levels in Hillside Slopes, Lakshmi N. Reddi and Tien H. Wu, GT June Slopes, Laksii 91, p872-890.

Simulation of Nonlinear Wave Runup on Steep Imperme able Slopes, A. N. Williams, W. G. McDougal, S. Zhang and S. N. Stevenson, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p.203-217.

Slope Remediation, Manfred R. Hausmann, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1274-1317.

Slope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867.

Slope Stabilization at the Forks of Butte Project, Stephen J. Klein and David K. Hughes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p905-922.

Stability Analysis of an Earth Slope, T. William Lambe and Francisco Silva-Tulla, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p27-69.

Stability and Performance of Slopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, 0-87262-872-8, 1574pp.

1992, 0-87262-872-8, 1574pp.
State-of-the-Art: Static Stability and Deformation Analysis, J. Michael Duncan, (Stability and Performance of Slopes and Embunkments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p222-266.
Velocity Profiles in Steep Open-Channel Flows, Akihiro Tominaga and Ichisa Nezu, Hy Jan. 92, p73-90.
Wave Runup on Smooth and Rock Slopes of Coastal Structures, Jentsje W. van der Meer and Cor-Jan M. Stam, WW Sept./Oct. 92, p534-550.

The Control of Large Amplitude Liquid Sloshing with Moving Baffles, T. C. Su and Y. X. Wang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p208-211.

Scour Protection at Bridge Piers, Yee-Meng Chiew, HY Sept. 92, p1260-1269.

Sludge Conditioning and Dewatering of Anaerobically Digested BPR Sludge, William R. Knocke, Jeffrey W. Nash and Clifford W. Randall, EE Sept./Oct. 92, p642-656.

Criticality Safety of TRU Storage Arrays at the Waste Isolation Pilot Plant, William A. Boyd and Mark W. Fecteau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2069-2077.

Committee, 1992), p2069-2077.
Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov/Dec. 92, p848-864.
Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, 0-87262-878-7, 685 pp.
From Sludge to Brokered Biosolids, Teresa Austin, CE Aug, 92, p32-35.

Hydrogen Generation During Treatment of Simulated High-Level Radioactive Waste with Formic Acid, J. A. Ritter, J. R. Zamecnik and C. W. Hsu, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 540-5540-55540.

p549-556.

p349-536.
Initial Comparison of Leach Behavior Between Fully Radioactive and Simulated Nuclear Waste Glasses Through Long-Term Testing, Part I. Solution Analysis, Xiangdong Feng and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p925-933.

Pysical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SY-101, Rudolph T. Allemann, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p610-614. Softening by Fluidized Bed Crystallizers, Willard D. Harms, Jr. and R. Bruce Robinson, EE July/Aug. 92,

p513-529.

Stabilization and Fixation Using Soil Mixing, Brian H. Jasperse and Christopher R. Ryan, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1273-

Synchrotron Radiation Measurements of Degree of Satu-ration in Porous Matrix, Scott A. Wells and Richard I. Dick, EM Aug. 92, p1738-1744.

Sludge digestion
U.S. Sludge Digesters: From Pancakes to Eggs, Teresa Austin, CE Oct. 92, p36-39.

Studge disposal Baltimore City's 1989 Sludge Crisis—A Case History, George G. Balog, Robert T. Mohr and Nicholas H. Frankos, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p256-261.

Linaweaver, ed., 1992), p.20-261.
Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutants Entering the Back River Waste Water Treatment Plant, George G. Balog and Ralph O. Cullison, III., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p145-150.

The Effects of Land Applied Water Treatment Residuals on Soil Phosphorus, James R. De Wolfe and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p297-302.

From Sludge to Brokered Biosolids, Teresa Austin, CE Aug, 92, p32-35.

In-Vessel Compost Systems: Technology Status, Philip E. Smith and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p291-296.

Nassau County Sludge Management Multi-Phased Environmental Assessment, Steve Fangmann, John Pascucci, Thomas Immerso, Carl Koch and Darleme McKinney, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274.

ncy, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274. Studge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Ba-log, Manu A. Patel and Turgay M. Ertugrul, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p303-308.

Sludge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar. Apr. 92, p196-208.

Unique Approach to Sludge Management, Suzanne L. Schweitzer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1922), p262-268.

Studge drying Canada Explores Studge-to-Fuel Process, CE June 92,

Canada Exposes
p18.

Celanese Wastewater Treatment Plant Upgrade, William
R. Gluck, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p281-286.

Linaweaver, ed., 1992), p281-286.

NonPolar Organics Toxicity in a Municipal Effluent, Carlos H. Victoria-Rueda, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p549-554.

Sludge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Balog, Manu A. Patel and Turgay M. Ertugrul, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p303-308.

Sludge treatment
Alkaline Sludge Stabilization: A "Quick Fix" and Long
Term Sludge Management Option for Burlington,
North Carolina, Stephen R. Shoaf, Morris V.
Brookhart and Gary S. MacConnell, (Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p399-

Alkaline Sludge Stabilization Processes Offer Viable Sludge Management Options, Gary S. MacConnell, Morris V. Brookhart and Philip E Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p394-398.

1992), p394-398 Sludge Crisis—A Case History, George G. Balog, Robert T. Mohr and Nicholas H. Frankos, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p256-261. Bioleaching of Metals from Sewage Sludge by Sulfur-Oxidizing Bacteria, J. F. Blais, R. D. Tyagi and J. C. Auclair, EE Sept./Oct. 92, p690-707.
Proward Getting the Most from Its Wastewater, CF Sept.

Broward Getting the Most from Its Wastewater, CE Sept. 92, p15,19.

Conditioning and Dewatering of Anaerobically Digested BPR Sludge, William R. Knocke, Jeffrey W. Nash and Clifford W. Randall, EE Sept./Oct. 92, p642-656.

Chitord W. Randaul, El Sept. Oct. 92, po42-030.

Effluent Nitrite Accumulation in the Heterotrophic Denitrification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

Flow Distribution in a Stacked Clarifier, M. Pad-manablian, T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633.

From Sludge to Brokered Biosolids, Teresa Austin, CE Aug. 92, p32-35.

Metallurgical Residue for Solubilization of Metals from Sewage Sludge, D. Couillard and G. Mercier, EE Sept./ Oct. 92, p808-813.

Oct. 92, p808-813.

Radiation Energy Treatment of Water, Wastewater and Sludge: A State-of-the-Art Report, Task Committee on Radiation Energy Treatment, Air and Radiation Management Committee, Environmental Engineering Division, (Paul Kruger, chmn.), 1992, 0-87262-901-5, 2992 Unique Approach to Sludge Management, Suzanne L. Schweitzer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p262-268.

Use of Manned Submersibles to Investigate Slumps in Deep Water Gulf of Mexico, Earl H. Doyle, Michael J. Kaluza and Harry H. Roberts, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p770-782.

Constitutive Modeling of Slurry Infiltrated Fiber Concrete (SIFCON), David J. Stevens, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p992-995.

Fracture Grouting with Bentonite Slurries, C. Ran and J. J. K. Daemen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p360-371.

Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, Ali M. Hamza and Antoine E. Naaman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p996-999

Physical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SV-101, Rudolph T. Allemann, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p610-614.

Sturry pipelines

Rock Creek—Cresta Sediment Management Plan, Larry
L. Harrison, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p102-107.

The Role of Soil Modification in Environmental Engineering Applications, James K. Mitchell and Wade A. Van Court, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p110-143.

mall crafts

Draft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, ASCE Ports and Harbors Task Committee (Paper Prepared by Fred A. Klancnik, Walter D. Ritchie, and David B. Vine), (Ports '92, David Torseth, ed., 1992), p939-1000.

seen, ed., 1992), p939-1000.

Praft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwaters, ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Ennio DeCurtis, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Douglas Sethness, 17., (Ports '92, David Torseth, ed., 1992), p1001-1069.

Praft Chapter 3—Planning and Design Guidelines for

1992, p1001-1009.
Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, ASCE Ports and Harbors Task Committee (Paper Prepared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster), (Ports '92, David Torseth, ed., 1992), p1070-1151. Charles G. Forster 1992), p1070-1151.

A Dual Approach to Low Frequency Energy Definition in a Small Craft Harbor, Chuck Mesa, (Coastal Engineer-ing Practice '92, Steven A. Hughes, ed., 1992), p400-

Planning and Design Guidelines for Small Craft Harbors, ASCE Ports and Harbors Task Committee (Paper Pre-pared by Fred A. Klancnik), (Ports '92, David Torseth, ed., 1992), p937-938.

Planning and Design Guidelines for Small Craft Har-bors—Economics and Finance, ASCE Ports and Har-bors Task Committee (Paper Prepared by Lawrence E. Williams, Fred A. Klancnik, Patrick L. Phillips), (Ports '92, David Torseth, ed., 1992), p1152-1183.

Wave Barriers: An Environmentally Benign Alternative, Jeffrey F. Gilman and Dennis Nottingham, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p479-486.

Saww
Status of ASCE Handbook of Hydrology, Thomas P.
Wootton, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992, p.448–51.
Targeting of Agl in a Utah Winter Orographic Storm,
James A. Heimbach, Jr. and Arlin B. Super, (Hrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Tree Engman, ed., 1992), p533–558.
Traffic Impact Assessment for Snow Disposal Facilities—Extended Abstract, John P. Braaksma, Ian Lockwood and Juan Salinas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed.,
Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992),
p175–179.

Saow loads
Roof-Snow Load for Seismic-Design Calculations, Michael J. O'Rourke and Robert S. Speck, Jr., ST Sept. 92, p2338-2350.

now roads

Decision Support System for Multiobjective Service Route Design, Jin-Yuan Wang and Jeff R. Wright, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

Snowmelt
Application of Monthly Model of Los Angeles Aqueduct
System to Investigate Impacts from Mono Lake Tributary Diversions, Russ T. Brown and William R.
Hutchison, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p10421048.

Social aspects

Modern Prisons Can Reduce Costs and Stress, CE Aug. 92, p14.

Social and Science Issues in the Local Environment, L. Gilbert and M. Robinson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1813-1818.

Social communication
Technology Transfer to Developing Countries, William J.
Carmack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman,
ed., 1992), p227-231.

ed., 1992), p.21-231.

Social Impact
Civil Engineers Shaping Society: Our Social Responsibilities, Dennis A. Randolph, El Jan. 92, piol-15.
Cloud Seeding: The Engineering is Done, but What About Social Impacts? Maurice Roos, (Irrigation and Drainage: Saring a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p565-570.
The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48.
Engineering a Monument, Evoking a Nightmare, Leo Argiris, Khosrow Namdar and Trevor Adams, CE Feb. 92, p48-51.
Housing Opportunity or Social Engineering Implement-

yas, pre-31.

using Opportunity or Social Engineering Implementing the Jobs-Housing Relationship—The Town of Wellington Experience, Jean E. Lindsey, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), in the 1 p82-90.

Social needs

Social needs
It's Time to Redefine Minority Businesses (ltr), Nina G.
Zolten, CE May 92, p30.
Kids at Work' Works at Brown & Root, CE May 92, p27.
Many Engineering Issues and Challenges Met in Development of Hong Kong. C. K. Chow, El Jan. 92, p60-70.
No Need to Sell When the Kids Move Away, CE Apr. 92, p10.

iocial val

Social values
Civil Engineers Shaping Society: Our Social Responsibilities, Dennis A. Randolph, El Jan. 92, p10-15.
Engineering Ethics in A Multicultural Global Economy, Richard H. McCuen, El July 91, p258-266.
Existentialism, Engineering, and Liberal Arts, David A. Bella, El July 90, p309-321.
Is the Knowledge Innovative? (Itr), Robert R. Bullard, CE May 92, p32-33.

Knowledge is Important No Matter Its Source (ltr), Jon B. Kasner, CE May 92, p30.

Knowledge is Important No Matter Its Source (Itr), Roy S. Kelley, CE May 92, p30,32.

Overview of AWARE: A Software Tool for Balancing Power and Nonpower Values in Water Resource Planning, Jennie S. Rice, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p108-116

Providing Lead Role in Work-Force Diversity, Robert E. Wolfe and Marie E. Anspach, El Jan. 92, p38-48.

Quantification of Agency and User Values of Pavement Performance, T. F. Fwa and K. C. Sinha, TE Jan./Feb. 92, p84-98.

Regarding Nature as Raw or Cooked, Margaret N. Max-ey, CE Oct. 91, p61-63.

A Setback for Set-Aside Contracts, Michael C. Loulakis and William L. Cregger, CE July 92, p44. Water Management: Challenge and Opportunity, Warren Viessman, Jr., WR Mar/Apr. 90, p155-169.

# ocioeconomic data

Comprehensive Regional Socioeconomic Simulation System, Gwan Kim, Pyong Sik Pak and Yutaka Suzuki, UP Sept. 92, p81-96.
Model for Air Travel Demand, V. R. Rengaraju and V. Thamizh Arasan, TE May/June 92, p371-380.

On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, David Lewis Feldman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992). p143-151.

Perceived Risk Impacts from Siting Hazardous Waste Fa-cilities, R. C. Hemphill, B. K. Edwards and G. W. Bassett, Jr., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992., p582-584

Social-Economic Impacts of the October 1983 Flood in Pima County, Arizona, David A. Smutzer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1072-1075.

Socioeconomic Accounting in Construction, Amir Ta-vakoli, Robert G. Ashmun and Cynthia S. Collyard, El

Apr. 92, p156-165.

Api, 22, p136-163.

The Socio-Economic Impact Assessment for Nuclear Fuel Waste Disposal—Meeting the Challenges of the Canadian Environmental Review Process, J. Tamm and T. Wlodarczyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1777-1785.

Sociological factors
Curriculum for Future Civil Engineers: Practitioner's
Viewpoint, Guy E. Jester, El Oct. 89, p357-362.

Engineering Women Into the Workplace, Patti Hinckley, CE Nov. 91, p66-67. CE. Nov. 91, poo-67.
Technology Transfer to Developing Countries, William J. Carmack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p227-231.
Thoughts on Management of Acquisitions, Melville Hensey, ME Apr. 92, p130-137.

## Soft soils

The Caisson Solution, Bennie L. Benjamin, Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47.

Weber and Jose A. Ramos, CE Dec. 92, p44-47.
Case History Evaluating Field Vane Correction Factors,
W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani
and Henty T. Taylor, (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p73-755.
A Design Method for Reinforced Clay Embankments on
Soft Foundations, Glen A. Roycroft, (Stability and Performance of Slopes and Embankments II, Raymond B.
Seed, ed. and Ross W. Boulanger, ed., 1992), p14811492

Development of Strain During Monotonic Shear of Soft Clay, Sam Frydman and Mark Talesnick, GT May 92, p704-725.

The Evolution of Geotextile Reinforced Embankments, C. Joel Sprague and Michael Koutsourais, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992). p1129-1141.

Inverse Analysis of Geotechnical Parameters on Improved Soft Bangkok Clay, Dennes T. Bergado, Apollo S. Enriquez, Casan L. Sampaco, Marolo C. Alfaro and A. S. Balasubramaniam, GT July 92, p1012-1030.

A. S. Balasudramanian, On July 72, pp. 102-1030.
Soft Clay Subgrade Stabilization Using Geocells, S. Y. Mhaiskar and J. N. Mandal, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1092-1103.

Stability Analysis of Reinforced Embankments on Soft Soils, Shenbaga R. Kaniraj and Hasan Abdullah, GT Dec. 92, p1994-1999.

Stability and Closure Design for a Landfill on Soft Clay and Peat, Richard A. Mitchell, Sybil E. Hatch and Ronald A. Siegel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p685-704.

Subaqueous Disposal Area Development and Mitigation, Scott A. Fritzinger, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744.

Undrained Analysis of Slopes Based on Effective Stress Methods, John F. Peters, Chris L. Saucier and Oswald Rendon-Herrero, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p493-505.

Yielding of Mexico City Clay and Other Natural Clays, J. A. Díaz-Rodríguez, S. Leroueil and J. D. Alemán, GT July 92, p981-995.

## Softening

Constitutive Model for Concrete in Strain Space, O. A. Pekau, Z. X. Zhang and G. T. Liu, EM Sept. 92, p1907-1927.

Dynamic Analysis of Elastoplastic Softening Discretized Structures, C. Comi, A. Corigliano and G. Maier, EM Dec. 92, p2352-2375.

FE Analysis of Time-Dependent Instability of Cut Slopes in Clay Shale, Nobuyuki Yoshida and Toshihisa Adachi, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p429-444.

Softening by Fluidized Bed Crystallizers, Willard D. Harms, Jr. and R. Bruce Robinson, EE July/Aug. 92,

Softening Models for Concrete: Stability and Uniqueness, Donald R. Curran, James K. Gran, Lynn Seaman and Tarabay H. Antoun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p369-

Softening of Fill Slopes Due to Moisture Infiltration, Robert W. Day and Gregory W. Axten, GT Sept. 90, p1424-1427.

TOC Removal by Coagulation and Softening, S. R. Qasim, S. A. Hasham and N. I. Ansari, EE May/June 92, p432-437.

Experimental Photoelastic Analysis of Tunnels Containing Cracks, Adel Y. Akl, S. S. Abdel Salam, M. H. El Haddad and Gouda A. Mohamed, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p276-279.

Use of GIS Technology for the Analysis and Visualization of Arsenic Concentration in Soils, Irene Findikaki, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p443-451.

Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopet and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.

Characterization of a Heavy Metal Contaminated Site, M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty, I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p463-467.

Critical Reapraisal of Colloidal Activity of Clays, N. S. Pandian and T. S. Nagaraj, GT Feb. 90, p285-296. The Effects of Land Applied Water Treatment Residuals on Soil Phosphorus, James R. De Wolfe and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p297-302.

The Small Mars Rover, A. L. Kemurdjian and V. V. Gromov, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p390-397.

oil classification

Soil classification of Slope Stability—A 25 Year Perspective, Norbert R. Morgenstern, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1-26.

ou. and Ross w. Boulanger, ed., 1992), p1-26.

Solid compactibility
Investigations on Influence of Vibration Parameters on
Compacting of Cohesionless Soils, Jerzy Sekowski,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p969-980.

1992), p969-980.

Soil compaction of Granular Soils—Remarks on Quality Control, Michele Jamiolkowski and Erio Pasqualini, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p902-914.

Dynamic Compaction Analysis, Y. K. Chow, D. M. Yong, K. Y. Yong and S. L. Lee, GT Aug, 92, p1141-1157.

Dynamic Compaction: Predicting Deepth of Improvement, Vince Luongo, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p927-939.

Investigations on Influence of Vibration Parameters on Compacting of Cohesionless Soils, Jerzy Sekowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p969-980.

Relative Compaction of Fill Having Oversize Particles, Robert W. Day, GT Oct. 89, p1487-1491.

Reliability Model for Soil Liner: Post Construction, I. Bogardi, W. E. Kelly and A. Bardossy, GT Oct. 90, p1502-1520.

Strain Compatibility Design Method for Reinforced Farth Walls with Kastalis Dai Granden.

Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.

Soll compressibility
Generalized State Parameter for Partly Saturated Soils,
N. S. Pandian, T. S. Nagaraj and G. L. Siva Kumar
Babu, GT Apr. 92, p622-627.

Soll conditions
The Design of Landfill Slopes, Ibraheem Alshunnar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1232-1243.

1992), p1232-1243.
Generalized State Parameter for Partly Saturated Soils, N. S. Pandian, T. S. Nagaraj and G. L. Siva Kumar Babu, GT Apr. 92, p622-627.
Instrumentation for Vehicle Mobility Testing in the Frost Effects Research Facility, Elisabeth Berliner and Sally Shoop, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p12-26.

Soil consolidation tests
Clay Strengthened for Boston Harbor Project, CE Nov.
92, p14.

Influence of Structure and Composition on Residual Soils, Laurence D. Wesley, GT Apr. 90, p589-603.

French Research Program CLOUTERRE on Soil Nailing, F. Schlosser, P. Unterreiner and C. Plumelle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p739-750.

13921, p739-750.

Recent Advances in Compaction Grouting Technology, James Warner, Norbert Schmidt, John Reed, Don Shepardson, Russ Lamb and Sam Wong, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p252-264.

Soil dilatancy
Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.
Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.

Soil dynamics

Cone Models for Homogeneous Soil. I, Jethro W. Meek and John P. Wolf, GT May 92, p667-685.

Cone Models for Soil Layer on Rigid Rock. II, Jethro W. Meek and John P. Wolf, GT May 92, p686-703.

Dynamic Response of Sand Reinforced with Randomly Distributed Fibers, Mohamad H. Maher and Richard D. Woods, GT July 90, p1116-1131.

Effect of Particle Contact Bond on Shear Modulus, Tzyy-Shiou Chang and Richard D. Woods, GT Aug. 92, p1216-1233.

Effect of Soil Treatment on Dynamic Response of Foundations, M. H. Maher and J. P. Welsh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p855-

500.
Evaluation of Soil Properties for Seismic Stability Analyses of Slopes, Geoffrey R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 16-142. Identification of Soil Properties from Foundation Impedance Functions, J. E. Luco and H. L. Wong, GT May

92, p780-795.

Regolith Mechanics, Dynamics, and Foundations, Mo-hammed M. Ettouney and Haym Benaroya, AS Apr. 92, p214-229.

Three-Dimensional Seismic Analysis of La Villita Dam, A.-W. Elgamal, GT Dec. 92, p1937-1958.

Calibrating SHE Soil-Erosion Model for Different Land Covers, J. M. Wicks, J. C. Bathurst and C. W. Johnson, IR Sept./Oct. 92, p708-723.

in Sept. 76, 776-75.
Sinkholes in Dams of Coarse, Broadly Graded Soils (Paper introduced by Jean Lafteur), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p312-323.

Some Engineering Problems with Dispersive Clays (Paper introduced by Lom P. Dunnigan), J. L. Sherard, L. P. Dunnigan and R. S. Decker, (Embankment Dums— James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p301-311.

Soil fertility

Son tertuny Technology Transfer for Projects in South America, Jo-seph B. Summers, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p209-214.

Soil freezing tests

Effects of Freezing on Hydraulic Conductivity of Com-pacted Clay, Woon-Hyung Kim and David E. Daniel, GT July 92, p1083-1097.

Soil gas

Rapid Detection of Hydrocarbon Contamination in Ground Water and Soil, A. M. Chrestman, G. D. Comes, S. S. Cooper and P. G. Malone, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1165-1170.

Soil gradation

Sinkholes in Dams of Coarse, Broadly Graded Soils
(Paper introduced by Jean Lafleur), James L. Sherard,
(Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p312-323.

Soil investigation

Soli investigations (Geotechnical Investigation Strategies for Lunar Base, Dan A. Brown and Glenn Rix, AS Apr. 92, p199-213.
Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodriguez, Maria C. Arbelaez, Takenori Satoh and Edward Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992), p390-402.

Soil layers

Cone Models for Soil Layer on Rigid Rock. II, Jethro W. Meek and John P. Wolf, GT May 92, p686-703. 
Identification of Soil Properties from Foundation Impedance Functions, J. E. Luco and H. L. Wong, GT May 92, p780-795.

Stiffness Coefficients of Layered Soil Systems, A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624.

Vadose Zone Composite Hydraulic Conductivity, Shu-Tung Chu, IR Sept./Oct. 92, p822-827.

Soil loss

Loss of Ground During CFA Pile Installation in Inner Urban Areas, Jacek K. Leznicki, Melvin I. Esrig and Robert G. Gaibrois, GT June 92, p947-950.

Seil mechanics

Analytical Solution of Steady Seepage into Double-Walled Cofferdams, Sunirmal Banerjee and Angel Mu-leshkov, EM Mar. 92, p525-539.

Comparison of Field and Laboratory Residual Strengths, Timothy D. Stark and Hisham T. Eid, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-

Construction Induced Movements of Insitu Walls, G. Wayne Clough and Thomas D. O'Rourke, (Design and Performance of Earth Retaining Structures, Philip Lambe, ed. and Lawrence A. Hansen, ed., 1990), p439-

Design of Anchored Geosynthetic Systems for Slope Sta-bilization, Roman D. Hryciw and Kamarudin Haji-Ahmad, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1464-1480.

Boulanger, ed., 1992), p1404-1480. Earthflow Evaluation and Control: A Case History, Mi-chael R. Thomas and Alan L. Kropp, (Stability and Per-formance of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p850-864. Effect of Particle Contact Bond on Shear Modulus, Tzyy-Shiou Chang and Richard D. Woods, GT Aug. 92, p1216-1233.

Effects of K<sub>0</sub> and Overconsolidation on Uplift Capacity, Adel Hanna and Ashraf Ghaly, GT Sept. 92, p1449-

Estimating Earth Pressures Due to Compaction, J. M. Duncan, G. W. Williams, A. L. Sehn and R. B. Seed, GT Dec. 91, p1833-1847.

G1 Dec. 31, p183-1847.
Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, G7 May 90, p74-789.
Evaluation of In Situ Effective Shear Modulus from Dispersion Measurements, Christos Vrettos and Bernd Prange, GT Cet. 90, p1581-1585.

Frange, G1 Cet. 90, p136-1535.
Frinte Element Analysis in Geotechnical Engineering, Jonathan D. Bray, Ross W. Boulanger, Soon Hue Chew and Raymond B. Seed, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417.

Identification of Soil Properties from Foundation Impedance Functions, J. E. Luco and H. L. Wong, GT May 92, p780-795.

Influence of Structure and Composition on Residual Soils, Laurence D. Wesley, GT Apr. 90, p589-603.

A Knowledge Based System with Uncertainty for the Soil, Cherif Boulemis, Daniel Boissier and Jihad Al-Hajjar, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), 3365-368.

Limited Compaction Grouting for Retaining Wall Repairs, Michael J. Byle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p288-300.

Local Buckling of Tubes in Elastic Continuum, James A. Cheney, EM Jan. 91, p205-216.

Mechanisms of Strength Loss in Stiff Clays, Timothy D. Stark and J. Michael Duncan, GT Jan. 91, p139-154. Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. 1: Theory, Ching S. Chang, Yang Chang and Mohammed G. Kabir, GT Dec. 92, p1959-

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, Ching S. Chang, Mo-hammed G. Kabir and Yang Chang, GT Dec. 92, p1975-1992.

On the Diffusional Stress Transmission, Włodzimierz Brzakała, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p175-178.

Pile Capacity for Axial Cyclic Loadings, Robert G. Bea, GT Jan. 92, p34-50.

Pullout Stiffness of Elastic Anchors in Slope Stabilization Systems, Roman D. Hryeiw and Masyhur Irsyam, GT June 92, p902-919.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166.

Regolith Mechanics, Dynamics, and Foundations, Mo-hammed M. Ettouney and Haym Benaroya, AS Apr. 92, p214-229.

Reinforced Granular Soil for Track Support, G. P. Raymond, M. S. A. Abdel-Baki, R. G. Karpurapu and R. J. Bathurst, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. 104-1115.

Seismic Passive Resistance of Tied-Back Walls, R. Richards, Jr. and D. G. Elms, GT July 92, p996-1011.

Settlements of Shallow Foundations on Cohesionless Soils, Basil P. Papadopoulos, GT Mar. 92, p377-393.

Simple Double-Hardening Model for Geomaterials, Sunirmal Banerjee, Robert O. Davis and Kandiah Sribalaskandarjah, GT June 92, p889-901.

Simple Procedure for Determining Cap-Plasticity-Model Parameters, Tien-Kuen Huang and Wai-Fah Chen, GT Mar. 90, p492-513.

Stresses Induced by Surficial and Deep Loading in Elastic Medium, Olivier Rossa and Gabriel Auvinet, GT Aug. 92, p1241-1246.

Taking the Lean Out of the Leaning Tower of Pisa?, CE

Taking the Lean Out of the Leaning Tower of Pisa?, CE Jan. 92, p12.

520

Undrained Shear Strength of Liquefied Sands for Stability Analysis, Timothy D. Stark and Gholamreza Mesri, GT Nov. 92, p1727-1747.

Uplift Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaly, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and ibankments II, Raymond B. Seed, ed. and Ross Boulanger, ed., 1992), p95-115.

Soil nating Analysis for Soil Reinforcement with Bending Stiffness, R. A. Jewell and M. J. Pedley, GT Oct. 92, p. 1505-1528.
French Research Program CLOUTERRE on Soil Nailing, F. Schlosser, P. Unterreiner and C. Plumelle, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p. 739-750.

Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Far-rag and Victor Elias, GT Jan. 90, p54-72.

New Facility Allows Large-Scale Tests of Soil-Nailed Walls, CE June 92, p20,22.

Walls, C.E. June 24, p.20, 22.
Permanent Excavation Support and Underpinning in Sands: A Case History, Russell J. Morgan, Lawrence F. Johnsen and Franklin M. Grynkewicz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p778-702.

Soil Nailing: A Simplified Kinematic Analysis, R. John Byrne, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p751-764.

Julian, ed., 1992, p. 731-764.
Soil Nailing Shown Seismically Stable, CE Dec. 92, p.24.
Timber Crib-Faced Soil-Nailed Retaining Wall, James G.
Collin, Mohammed A. Gabr and Alan G. MacKinnon,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p.1457-1463.

Soil permeability
Analysis of Soil-Air Permeability and Saturated Hydraulic Conductivity for Remedial System Design, Hamid G. Bojd and B. V. Nanjundeswar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p321-326. Grouting Improvement of Foundation Soils, Francesco Gallavresi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1-38.

Ilian Juran, ed., 1992, p1-36.
Ongoing Monitoring Results Pilot Stormwater Disposal Facilities, Pierce County, Washington, Molly Adolfson and Dan Clark, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p510-

515.
Predicting Effects of Subsidence on Landfill Caps, A. W. Bredariol, J. Larralde, J. P. Martin and C. A. Fiori, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p360-364.
Variations of Hydrological Parameters of Tuff and Soil, J. S. Y. Wang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p727-731.

Soil pollution

Characterization of a Heavy Metal Contaminated Site, M. K. Banks, B. A. Hetrick, A. P. Schwab, K. G. Shetty, I. Abdelsaheb and G. Fleming, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Lianweaver, ed., 1992), 463-467.

Cleaning Up Chromium, W. Scott McKinley, Randy C. Pratt and Loren C. McPhillips, CE Mar. 92, p69-71.

Clean-Up of Contaminated Soils: A Necessary First Step in Industrial Land Redevelopment, Dennis D. Lang, (Ports '92, David Torseth, ed., 1992), p301-315.

Computer Codes for Modeling Multi-Phase Flow and Transport in the Subsurface, Paul K. M. van der Heijde, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p31.

Electrokinetic Cleanups, Yalcin B. Acar, CE Oct. 92, p58-60.

p.88-60. Electrokinetic Soil Processing (A Review of the State of the Art), Yalcin B. Acar, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1420-1432. Electroosmotic Contaminant-Removal Processes, Burton A. Segall and Clifford J. Bruell, EE Jan./Feb. 92, p84-

100.
Excavations and Contamination, Bryan P. Sweeney and Joel S. Mooney, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p.26-45.
Field Analysis of Contaminated Sediments by Immunoassay, Deborah J. Mossman, Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p110-

aprovement of Fuel Oil Contaminated Soils by Additives, Sibel Pamukcu and Hazem Hijazi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), Improven

p1285-1297.

pl283-1291. Integrated Remediation of Soil and Groundwater, Russell S. Dykes and Arlin C. Howles, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p244-249. Mammoth Cleanup for Kuwait's Contaminated Soil, CE Sept. 92, p22,26.

Sept. 92, p22,26.
A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2,4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, P. S. Ho and W. F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p364-369.
Principles of Ground Modification with Electromagnetic Waves, J. C. Santamarina and Y. N. Wakim, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), n1380-1392.

p1380-1392.

ed., Robert O. Holtz, ed. and Itan Juran, ed., 1992), p1380-1392.

Process Design for Bioremediation of Nitrogen-Species Contamination of Soils and Groundwater, Paul D. Turpin, J. Michael Henson and Steven L. Martin, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.

Properties of Solidified/Stabilized Chromium Contaminated Soil, Beth C. Fleming and M. John Cullinane, Ir., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1204-1209.

Rapid Detection of Hydrocarbon Contamination in Ground Water and Soil, A. M. Chrestman, G. D. Comes, S. S. Cooper and P. G. Malone, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1165-1170.

Soil Contamination Issues at Port Marine Terminals, Donald W. Rice, (Ports '92, David Torseth, ed., 1992), p288-300.

p288-300

Use of GIS Technology for the Analysis and Visualization of Arsenic Concentration in Soils, Irene Findikast, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p443–451.

Soil porosity
High Frequency Basin Irrigation Design for Upland
Crops in Rice Lands, George J. Moridis and Manuel
Alagcan, IR July/Aug. 92, p564-583.

Soll pressure Taking the Lean Out of the Leaning Tower of Pisa?, CE Jan. 92, p12.

Jan. 92, p12.

Soil properties
Analysis of Compressibility of Sensitive Soils, T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

Constitutive Equation for Granular Material by Hypoelasticity, R. K. Mysore and W. E. Falby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p733-736.

Critical Reappraisal of Colloidal Activity of Clays, N. S. Pandian and T. S. Nagaraj, GT Feb. 90, p285-296.

Diffuse Double-Layer Equations in SI Units, Albert T. Yeung, GT Dec. 92, p2000-2005.

Evaluation of Soil Properties for Seismic Stability and Performance of Slopes, Geoffrey R. Martin, (Stability and Performance of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p16-142.

Geotechnical Database Manipulation to Effect Stochastic Analysis, James M. Keane, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p224-227.

Geotechnology: An Environment of Change, Jean-Yves

ed., 1992), p224-227.

Geotechnology: An Environment of Change, Jean-Yves Perez, CE Dec. 91, p44-45.

Identification and Nature of Dispersive Soils (Paper introduced by Lorn P. Dunnigan), James L. Sherard, Lorn P. Dunnigan and Rey S. Decker, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p285-300.

Mechanical Properties of Lunar Soil and Simulants, Valery V. Gromov and W. David Carrier, III., (Engineering, Construction, and Operations in Space III., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p518-527.

Modeling Strength of Sandy Gravel, Richard J. Fragaszy, James Su, Farhat H. Siddiqi and Carlton L. Ho, GT June 92, p920-935.

June 92, p920-935.

June 92, p920-935.

New Facility Allows Large-Scale Tests of Soil-Nailed Walls, CE June 92, p20,22.

On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and Embankments 11, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p95-115.

Probabilistic Particle-Related Constitutive Model for Clayey Material, Mohammad Djavid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, V. K. Lin, ed. 1992), p471-474.

Clayey Marchand Continued and Geotecnman Mechanics and Structural and Geotecnman Y. K. Lin, ed., 1992), p471-474.

The Role of Engineering Geology in Slope and Embankment Stability Analysis, Richard W. Galster, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p471-04

p70-94.

Seasonal Soil Strength by Spectral Analysis of Surface Waves, Bernard D. Alkire, CR Mar. 92, p22-38.

Stability and Performance of Stopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, 0-87262-872-8, 1574pp.

Stabilization and Fixation Using Soil Mixing, Brian H. Jasperse and Christopher R. Ryan, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1273-1284.

1284. Stress-Strain-Strength Responses of Compressible Chica-go Glacial Clays, Richard J. Finno and Choong-Ki Chung, GT Oct. 92, p1607-1625. Swimming Pools Supported by Dissimilar Bearing Strata, G. S. Kovacs, CF May 92, p118-120.

Soll resistance
Use of Drilled Shafts in Stabilizing a Slope, Lymon C.
Reese, Shin-Tower Wang and Jeffrey L. Fouse, (Stability and Performance of Slopes and Embankments II,
Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p1318-1332.

Analysis of Compressibility of Sensitive Soils, T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

Soll sampling Mechanical Properties of Lunar Soil and Simulants, Valery V. Gromov and W. David Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p518-527.

The Small Mars Rover, A. L. Kemurdjian and V. V. Gro-mov, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p390-397.

Soil settlement
Computer literative Technique for Soil-Structure Interaction, Rusk Masih, (Computing in Civil Engineering and
Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p418-425.
Damage of Entryway Stairs due to Settlement of Gravel
Backfill, Robert W. Day, CF May 92, p121-124.
Estimating Thaw-Strain Settlement of Frozen Fill, G.
Scott Crowther, CR Dec. 92, p152-159.

Soil, shear strength
Further Contributions to Reliability-Based PileSettlement Analysis, S. T. Quek, Y. K. Chow and K. K.
Phoon, GT May 92, p726-742.
Slope Remediation, Manfred R. Hausmann, (Stability
and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992),
1374-1376. p1274-1317.

Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.

oil stability

Soll stability
Excavation and Support Systems in Urban Settings, J. P. Gould, G. J. Tamaro and J. P. Powers, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171.
A New Design Chart for Reinforced Embankments, M. Soubra, C. Coulet and D. Rakotondramanitra, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1163-1174.
On the Evaluation of Static Soil Properties. Fred H.

1992), p1163-1174.
On the Evaluation of Static Soil Properties, Fred H. Kulhawy, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p95-115.
Problems Related to Disposal of Fly Ash and its Utilization as a Structural Fill, Buddhima Indraratna, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p274-285.

oil stabilization

Soil stabilization
Biotechnical Stabilization of Cut & Fill Slopes, Donald H.
Gray and Robbin B. Sotir, (Stability and Performance
of Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p1395-1410.
Biotechnical Stabilization of Highway Cut Slope, Donald
H. Gray and Robbin B. Sotir, GT Sept. 92, p1395-

1409

Cement-Stabilized Soil for Coal Retaining Berms, Gary J. Van Riessen and Kenneth D. Hansen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p981-

992.
Deep Compaction by Vibro Wing Technique and Dynamic Compaction, Kaare Senneset and Jarle Nest-vold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Illan Juran, ed., 1992), p889-901.

Journal, ed., 1992, p889-901.
Densification of Loose Sands by Deep Blasting, Ulrich La Fosse and Theodore von Rosenvinge, IV, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p954-968.

p954-968.
The Design of a Reclamation Scheme by Preloading, S. Ossama Mazen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. 1019-1030.
A Design Theory for Compaction Grouting, John H. Schmertmann and James F. Henry, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p215-228.

The Evolution of Geotextile Reinforced Embankments, C. Joel Sprague and Michael Koutsourais, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1129-1141.

p1129-1191.
Experimental and Theoretical Study of Flexural Behavior of Polymer Fiber Reinforced, Cement-Treated Soils, Robert Liang, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1080-1091.

French Research Program CLOUTERRE on Soil Nailing, F. Schlosser, P. Unterreiner and C. Plumelle, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p739-750.

Grouting, Soil Improvement and Geosynthetics, Geo-technical Special Publication No. 30, 2 vols, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, 0-87262-865-5, 1480pp.

Improvement of Fuel Oil Contaminated Soils by Additives, Sibel Pamukcu and Hazem Hijazi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1285-1297.

Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, Grouting, Soil Improvement and Goosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p791-802.

The Role of Soil Modification in Environmental Engineering Applications, James K. Mitchell and Wade A. Van Court, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p110-143.

Selection and Laboratory Evaluation of Modifying Additives for Soil-Cement-Bentonite, T. S. McFarlane and R. D. Holtz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1006-1018.

Shallow Soil Mixing—A Case History, David Broomhead and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p564-576.

Stability of Embankments over Weak Soils of Limited Thickness, Radoslaw L. Michalowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holiz, ed. and llan Juran, ed., 1992), p1142-1152.

Stabilization and Fixation Using Soil Mixing, Brian H. Jasperse and Christopher R. Ryan, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1273-

Stabilization of Tablachaca Dam Landslide, Richard A. Millet, Gil M. Lawton, Pedro C. Repetto and Vinod K. Garga, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1365-1381.

Unified Approach to Ground Improvement by Heavy Tamping, Kwang Wei Lo, Peng Lee Ooi and Seng-Lip Lee, GT Mar. 90, p514-527.

soil strength

Hydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, Victor R. Hasfurther and John P. Turner, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-Threatened Resource-In aman, ed., 1992), p395-400.

Long Term Behavior of Urban Fill Embankments, J. David Rogers, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1258-1273.

Pipe Soil Stiffness Ratio Effect on Flexible Pipe Buckling Threshold, Kenneth K. Kienow and Robert C. Prevost, TE Mar./Apr. 89, p112-129.

Soil Strengths from Back Analysis of Slope Failures, J. Michael Duncan and Timothy D. Stark, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p890-

Stabilized Active Clay by Sand Admixture, Pat T. Leelani, Maen M. Shaar and Phil V. Compton, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., den, ed., Robert ( 1992), p1042-1053

Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.

Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.

Soil structure

The Behavior of Reinforced Soil Walls Constructed by Different Techniques, A. McGown, K. H. Loke and T. Murray, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p1237-1248.

Considerate Models of Clav-Lime Reinforced Soil Walls,

Centrifuge Models of Clay-Lime Reinforced Soil Walls, Erol Güler and Deborah J. Goodings, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1249-

A Computer Program for the Analysis of Reinforced Soil, F. Reyna, D. Humphrey, B. Christopher and J. L. Chameau, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1225-1236.

Ilan Juran, ed., 1992), p1223-1236.
 Cylindrical Fabric-Confined Soil Structures, Richard A. Harrison, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p123-134.
 Design of Geosynthetic-Reinforced Soil Structures, Kh. Farrag and I. Juran, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1 188-1200.
 Finite Element Analysis of Slores with Layer Reinforce.

ed. and Han Juran, ed., 1992), p. 1160-1200.
Finite Element Analysis of Slopes with Layer Reinforcement, Robert M. Ebeling, John F. Peters and Reed L. Mosher, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p. 1427-1443.

Geographic Reinforced Soil Structures Down Leibabin.

Boulanger, ed., 1992, p.1427-1443.
Geosynthetic Reinforced Soil Structures, Dov Leshchinsky and Ralph H. Boedeker, GT Oct. 89, p1459-1478.
Geosynthetic Strength—Ultimate and Serviceability Limit State Design, R. J. Fannin and S. Hermann, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1411-1426.

Influence of Structure and Composition on Residual Soils, Laurence D. Wesley, GT Apr. 90, p589-603. Laboratory Model Study on Geosynthetic Reinforced Soil Retaining Walls, I. Juran and B. Christopher, GT July 89, p905-926.

Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.

Structural Evaluation of Box Culverts, Shad M. Sargand, Glenn A. Hazen and John O. Hurd, ST Dec. 92, p3297-3314.

wo Full Size Structures Reinforced by Geotextiles, Ph. Delmas, Ph. Gotteland, J. P. Gourc and S. Haïdar, Gerouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. [201-1212.

Sample Disturbance of Cemented Collapsible Soils, Sandra L. Houston and Mostafa El-Ehwany, GT May 91, p731-752.

Settlement and Moisture Movement in Collapsible Soils, Mostafa El-Ehwany and Sandra L. Houston, GT Oct. 90, p1521-1535.

Soil surveys

Soil surveys Evaluation of Expansive Clay Soils in Tucson, Arizona, Mark W. Brooks and Edward A. Nowatzki, (Probabilis-tic Mechanics and Structural and Geotechnical Reliabil-ity, Y. K. Lin, ed., 1992), p220-223.

Automating The Corps, James Denning, CE Apr. 92, p65-67.

The Effective Stress Path for Soil at High Pressure, Jerry A. Yamamuro and Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p729-732.

ed., 1992), p729-732.

Experimental Study of Underground Exploration by Auger Boring on a Mars Rover, Masaki Kojima, Kenji Saitou, Yutaka Kaneko and Nobuki Kawashima, Ergineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p416-426.

The Lathrop Wells Volcanic Center: Status of Field and Geochronology Studies, B. Crowe, R. Morley, S. Wells, J. Geissman, E. McDonald, L. McFadden, F. Perry, M. Murrell, J. Poths and S. Forman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013.

Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, Mark P. Nathan, Frank Barnes, Hon-Yim Ko and Stein Sture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 9441-457.

Relative Compaction of Fill Having Oversize Particles, Robert W. Day, GT Oct. 89, p1487-1491.

Soil Behavior from Unconventional Loading Conditions, Kamal Tawfiq, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p272-275.

USAF's New Contingency Soils/Pavement Testing Van, Mark S. Buncher and Don J. Christiansen, (Road and Airport Pavement Response Monitoring Systems, Vin-cent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p27-40.

Soil treatment
Bugs Vacuum Dirty Soil, CE Nov. 92, p87.
Effect of Soil Treatment on Dynamic Response of Foundations, M. H. Maher and J. P. Welsh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p855-

866.

Blectrokinetic Soil Processing (A Review of the State of the Art), Yalcin B. Acar, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, pl 420-1432. Improvement of Fuel Oil Contaminated Soils by Additives, Sibel Pamukuc and Hazem Hijazi, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 285-1297.

Mammoth Cleanup for Kuwait's Contaminated Soil, CE Sept. 92, p22,26.

Sep. 76, pa4,20.

Principles of Ground Modification with Electromagnetic Waves, J. C. Santamarina and Y. N. Wakim, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), ed., Robert p1380-1392

p1380-1392.

Properties of Solidified/Stabilized Chromium Contaminated Soil, Beth C. Fleming and M. John Cullinane, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1204-1209.

Soil-Washing Plant to Help Dirt Come Clean, CE Aug.

92, p14.

yz, p14.
A Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinipour and Vincent M. Gorokhovski, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p186-191.

Soil water

2-D Evaporation and Root Extraction in an FEM, Richard G. Allen and Wigdan I. Ahmad, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p189-196.

Adaptation of Horton and SCS Infiltration Equations to Complex Storms, Gert Aron, IR Mar/Apr. 92, p275-284.

284.
Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.
Effects of Soil Moisture and Physical-Chemical Properties of Organic Pollutants on Vapor-Phase Transport in the Vadose Zone, Say Kee Ong, Theresa B. Culver, Leonard W. Lion and Christine A. Shoemaker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Bennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179.
Efform Shallow Groundwater Maintained by Controlled-Drainage/Subirrigation System, James L. Fouss and James S. Rogers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p594.

Evaluation of Soil Water Sensors in Frozen Soils, John L. Nieber, John M. Baker and Egbert J. A. Spaans, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

Irrigation, Drainage, and Landscaping for Expansive Soil, Robert W. Day, IR Mar./Apr. 92, p285-290. Irrigation Timing for Wheat Based on Climate, Crop, and Soil Data, R. P. Tripathi, IR May/June 92, p370-381.

Model and Calculations for Net Infiltration, Stuart W. Childs and Austin Long, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1633-1642.

Precision of Evapotranspiration Estimates Using Neutron Probe, Osmar A. Carrijo and Richard H. Cuenca, IR Nov./Dec. 92, p943-953.

Soil Moisture and Runoff—Another Look, Joseph A. Van Mullem, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), 9366-371.

Stochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/

Aug. 92, p527-542

Aug. 24, p521-342.

Three Dimensional Modeling of Watershed Hydrology, M. N. Saquib and M. L. Kavvas, (Water Resources-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p391-396.

Two-Dimensional Analysis of Furrow Infiltration, T. Vogel and J. W. Hopmans, IR Sept./Oct. 92, p791-806.

oil water m

Soil water movement

2-D Evaporation and Root Extraction in an FEM,
Richard G. Allen and Wigdan I. Ahmad, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p189-196.

Damage to Two Apartment Buildings Due to Moisture
Variation of Expansive Soil, Robert W. Day, CF Aug.
92, p169-176.

92, p109-176.

Long Term Behavior of Urban Fill Embankments, J.

David Rogers, (Stability and Performance of Slopes and

Embankments II, Raymond B. Seed, ed. and Ross W.

Boulanger, ed., 1992), p1258-1273.

Settlement and Moisture Movement in Collapsible Soils,

Mostafa El-Ehwany and Sandra L. Houston, GT Oct.

90, p1521-1535.

Soil-pile interaction

An Alternative Analysis of Vibration Tests on Two Pile Group Foundations, Alex Sy, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p136-152.

Analysis of Performance of Pile Groups Adjacent to Deep Excavation, Richard J. Finno, Samir A. Lawrence, Na-bil F. Allawh and Indra S. Harahap, GT June 91, p934-955.

Dynamic Parameters Analysis of Piles, Xiao M. Zhu, Hsien P. Niu and Suo X. Zhang, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p224-240.

Donain, Soil-Pile-Structure Interaction—The State-of-Practice, Asadour H. Hadjian, Richard B. Fallgren and Mark R. Tufenkijan, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p1-26.

First and Second Order Dynamic Subgrade Models for Soil-Pile Interaction Analysis, Toyoaki Nogami, Jiang-Xiong Zhu and Takayoshi Ito, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p187-206.

Loads, Shamsher Prakash, ed., 1992), p187-206.
Forced Vibration Testing of an Expanded Base Concrete
Pile, Alex Sy and David Siu, (Piles Under Dynamic
Loads, Shamsher Prakash, ed., 1992), p170-186.
Further Contributions to Reliability-Based PileSettlement Analysis, S. T. Quek, Y. K. Chow and K. K.
Phoon, GT May 92, p726-742.
Interactive Base-Isolation Foundation System: I. Final
Gould, EM Oct. 92, p2048-2058.
Interactive Base-Isolation Foundation System: II ParaInteractive Base-Isolation Foundation System: II ParaInteractive Base-Isolation Foundation System: III Para-

Interactive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.

Oct. 92, p2059-2071.

Nonlinear Soil-Pile Interaction Model for Dynamic Lateral Motion, Toyoaki Nogami, Jun Otani, Kazuo Konagai and Hsiao-Lian Chen, GT Jan. 92, p89-106.

Observed and Predicted Response of Piles Under Dynamic Loads, Vijay K. Puri and Shamsher Prakash, Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p153-169.

Piles Under Dynamic Loads, Geotechnical Special Publication No. 34, Shamsher Prakash, ed., 1992, 0-87262-905-8, 270pp.

Reserve Canacity Design Method (RCDM) for Deepwat-

Reserve Capacity Design Method (RCDM) for Deepwater Piled Foundations, J. M. E. Audibert, J. L. Mueller and S. R. Bamford, WW Jan./Feb. 92, p32-42.

Seismic Pile-Group—Structure Interaction, G. Gazetas, K. Fan, T. Tazoh, K. Shimizu, M. Kavvadas and N. Makris, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93.

Skin Friction Distributions on Piles in Sand, Nazrul I.
 Khan, John S. Templeton, III. and Michael W. O'Neill,
 (Civil Engineering in the Oceans V, Robert T.
 Hudspeth, ed., 1992), p783-797.
 Soil-Pile-Superstructure System in Liquefaction, S. Yao and K. Kobayashi, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p241-255.
 The Superposition Approach to Pile Group Dynamics, H.
 El-Marsafawi, A. M. Kaynia and M. Novak, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p114-135.

Soil-spie interaction

Pipe Soil Stiffness Ratio Effect on Flexible Pipe Buckling
Threshold, Kenneth K. Kienow and Robert C. Prevost,
TE Mar/Apr. 89, p1 12-129.

Pipeline Storm Behavior on Clay Soils, Derek V. Morris,
Tony S. Yen, Wayne A. Dunlap and James R. Hale,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p560-570.

524

Solts Manalysis of a Wharf for a Container Terminal, Luis Her-nández Toca and José A. Arréllaga, (Forts '92, David Torseth, ed., 1992), p.228-237.
Analysis of Compressibility of Sensitive Soils, T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

Analysis of Compressibility of Sensitive Soils, I. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118.

Associative Plasticity for Dilatant Soils, Panos D. Kiousis and Ali A. Abdulla, EM Apr. 92, p763-785.

Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1139-1149.

Beneficiation of Lunar Rocks and Regolith: Concepts and Difficulties, Lawrence A. Taylor and David S. McKay, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1058-1069.

Constitutive Modeling for Material with Perfect Disordered Heterogeneity, X. Lee and C. S. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p445-448.

Evaluation of Plastic Bifurcation for Plane Strain versus Axisymmetry, Dunja Perić, Kenneth Runesson and Stein Sture, EM Mar. 92, p512-524.

Evaluation of Seismic Soil Response Using Stochastic Linearization, Jeen-Shang Lin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p336-359.

Experimental and Theoretical Dynamic Compliances of Foundations, Ronald Y. S. Pak and Bojan B. Guzina, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p596-599.

Extended Split-Hopkinson Bar Analysis for Attenuating Materials, Conrad W. Felice, Edward S. Gaffney and Joseph A. Brown, EM May 91, p119-1135.

Flexible Plates for Control of Stress Distribution, Nenad Gucunski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p592-595.

and John M. Niedzwecki, ed., 1992), p592-595. High Frequency Basin Irrigation Design for Upland Crops in Rice Lands, George J. Moridis and Manuel Alagcan, IR, July/Aug. 92, p564-583. Hydrogen Reduction of Lunar Soil and Simulants, Robert O. Ness, Jr., Laura L. Sharp, David W. Brekke, Christian W. Knudsen and Michael A. Gibson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p617-628.

1992), p617-628.

Icon-Based Concept for Exploring Rover Autonomy, J. H. Allton and Damian Lyons, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2400-2411.

Indigenous Planetary Construction Material Through Soil Modification, Leonhard E. Bernold, Yasuyuki Horie and Mark B. Boslough, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p493-503.

In-situ Release of Solar Wind Gases from Lunar Soil, Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p537-546.

Isotopic Separation of "He-Prom Solar Wind Gasse Evolved from the Lunar Regolith, William R. Wilkes and Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.

Jet Grouting in Contaminated Soils, Herff N. Gazzaway and Brian H. Jasperse, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p206-214.

Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chua, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1941-1951.

Lunar Oxygen—The Reduction of Glass by Hydrogen, Carlton C. Allen, David S. McKay and Richard V. Morris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p599-460.

Mars Containers: Dust on Teflon Sealing Surfaces, H. V. Lauer, Jr. and J. H. Allton, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p508-517.

Mathematical Characterization of Fabric and Its Use in Mechanics of Geomaterials, B. Muhunthan and J. L. Chameau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p725-728.

Measured Hill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports 92, David Torseth, ed., 1992), p36-389.

Measurement of Shock Pressure from FWD on a Concrete Pavement by Impedance-Matched Shock Gauge, Piyush K. Dutta and John Kallafu, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228.

The Mechanical Aging of Soils, John H. Schmertmann, GT Sept. 91, p1288-1330.

Mobile Continuous Lunar Excavation, John L. Paterson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1070-1079.

Modeling Effects of Chemical Explosives for Excavation on Moon, Deborah J. Goodings, Chaun-Ping Lin, Richard O. Dick, William L. Fourmey and Leonhard E. Bernold, AS Jan. 92, p44-58.

A Monumerial Task, V

Movement of Nonpoint-Source Contaminants Through Heterogeneous Soils, John C. Tracy, IR Jan./Feb. 92, p88-103.

rieterogeneous Soils, John C. Tracy, IR Jan./Feb. 92, p88-103.

On the Beneficiation and Comminution of Lunar Regolith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138. Principles of Control for Robotic Excavation, Leonhard E. Bernold, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1401-1412. Production of Oxygen by Electro-Reduction of Lunar Ores, B. Mishra, D. L. Olson, J. J. Moore and W. A. Averill, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677. Regolith Dynamics, Mohammed M. Ettouney and Haym Benaroya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1379-1388. Reinforced Sand Behavior Overlying Compressible Subgrades, Gerald P. Raymond, GT Nov. 92, p1663-1680.

Reliability Model for Soil Liner: Post Construction, I. Bo-gardi, W. E. Kelly and A. Bardossy, GT Oct. 90, p1502-1520.

p1302-1320. eismic Response Variability of Soil Sites, C. H. Yeh and M. S. Rahman, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p392-395.

p392-395.

Steady State Composition with Low Fe<sup>2+</sup> Concentrations for Efficient O<sub>2</sub> Production by "Magma" Electrolysis of Lunar Solls, Larry A. Haskin and Russell O. Colson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p651-665.

Strain-Softening Behavior of Granular Soil in Strain-Path Testing, J. Chu, S.-C. R. Lo and I. K. Lee, GT Feb. 92, p191-208.

ransport of Low-Level Radioactive Soil at Deep-Ocean Disposal Site, James S. Bonner, Carlton D. Hunt, John F. Paul and Victor J. Bierman, Jr., EE Jan./Feb. 92, p101-119.

Use of Explosives on the Moon, Richard D. Dick, William L. Fourney, Deborah J. Goodings, Chaun-Ping Lin and Leonhard E. Bernold, AS Jan. 92, p59-69. Using GIS To Locate Salinity on Irrigated Soils, Dennis L. Corwin, Mark Sorensen and James D. Rhoades, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p468-475. Water Quality Effects on Eucalyptus ET, Allen Dong, Kenneth Tanji, Steve Grattan, Fawzi Karajeh and Marc Parlange, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p164-170.

Adaptation of Horton and SCS Infiltration Equations to Complex Storms, Gert Aron, IR Mar./Apr. 92, p275-284.

284. Analysis of Recharge in Anisotropic, Layered, Saturated-Unsaturated Soil, Abolfazi Shamsai and Miguel A. Mariño, IR July/Aug. 29, 584-600.
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. I: Theory, Robert Y. Liang and Fengang Ma, GT Feb. 92, p229-245.
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. II: Verification, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p246-265.
Electrogenetic Contaminant, Permoval Processes. Button

Electroosmotic Contaminant-Removal Processes, Burton A. Segall and Clifford J. Bruell, EE Jan./Feb. 92, p84-100.

Electroosomotic Removal of Gasoline Hydrocarbons and TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

Generalized State Parameter for Partly Saturated Soils, N. S. Pandian, T. S. Nagaraj and G. L. Siva Kumar Babu, GT Apr. 92, p622-627.

Minimum Undrained Strength of Two Sands, J.-M. Kon-rad, GT June 90, p932-947.

## oils, uns

Analysis of Recharge in Anisotropic, Layered, Saturated-Unsaturated Soil, Abolfazi Shamsai and Miguel A. Mariño, IR July/Aug. 92, p584-600.

Comparative Survey of Four Unsaturated Soil Flow Equations, Abbas A. Fiuzat and David W. Moughton, HY May 92, p786-791.

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1972-1984.

Modeling of Soil Venting Processes to Remediate Unsaturated Soils, Suresh Lingineni and Vijay K. Dhir, EE Jan./Feb. 92, p135-152.

Jan./reb. 94, p135-154.
Proposed Sealing Field Tests for a Potential High-Level Radioactive Waste Repository in Unsaturated Tuff. Joseph A. Fernandez, John B. Case and Joseph Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2290-2297.

Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, J. B. Case, J. A. Fernandez and J. R. Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2298-2305.

Analysis for Soil Reinforcement with Bending Stiffness, R. A. Jewell and M. J. Pedley, GT Oct. 92, pl 505-1528.

Batter Piles and the Seismic Performance of Pile-Supported Wharves, W. H. Roth, H. Fong and C. de Rubertis, (Ports '92, David Torseth, ed., 1992), p336-349.

Computer Iterative Technique for Soil-Structure Interac-tion, Rusk Masih, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p418-425.

Dynamic Response of Flexibly Supported Liquid-Storage Tanks, Anestis S. Veletsos, Yu Tang and H. T. Tang, ST Jan. 92, p264-283.

Dynamic Soil-Pile-Structure Interaction—The State-of-Practice, Asadour H. Hadjian, Richard B. Fallgren and Mark R. Tufenkjian, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p1-26.

Effect of Soil Treatment on Dynamic Response of Foundations, M. H. Maher and J. P. Welsh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p855-866

Elastic Solutions for Arbitrarily Shaped Foundations, K. S. Li, GT June 92, p938-942.

Finite Element Analysis in Geotechnical Engineering, Jonathan D. Bray, Ross W. Boulanger, Soon Hue Chew and Raymond B. Seed, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417.

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401.

Interaction Between Soil and a Rigid Foundation in a Layered Medium: A New Analytical Approach, R. C. Zhang, Y. Yong and J. Yu. (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p584-587.

Interactive Base-Isolation Foundation System: I. Finite Element Formulation, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2048-2058.

Local Buckling of Tubes in Elastic Continuum, James A. Cheney, EM Jan. 91, p205-216.

Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodriguez, Maria C. Arbelaez, Takenori Satoh and Edward Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992),

Parametric Study of Seismic Soil-Tank Interaction. I: Horizontal Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p783-797.

Parametric Study of Seismic Soil-Tank Interaction. II: Vertical Excitation, Medhat A. Haroun and Wajdi Abou-Izzeddine, ST Mar. 92, p798-812.

Pile Lateral Load Test in the Port of Los Angeles, Mat-thew F. Hunter, Allen M. Yourman, Gerald M. Diaz and Hsueh-Hsin Chu, (*Ports '92*, David Torseth, ed., 1992), 9322-335.

Predicting the Performance Limits of Soil-Culvert Sys-tems, Yahia E. -A. Mohamedzein, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911.

Preliminary Design for NATM Tunnel Support in Soil, Eric Leca and G. Wayne Clough, GT Apr. 92, p558-

Pullout Stiffness of Elastic Anchors in Slope Stabilization Systems, Roman D. Hryciw and Masyhur Irsyam, GT June 92, p902-919.

Recorded Seismic Response of Pacific Park Plaza. II: Sys-tem Identification, E. Şafak and M. Çelebi, ST June 92, p1566-1589.

Seismic Pile-Group—Structure Interaction, G. Gazetas, K. Fan, T. Tazoh, K. Shimizu, M. Kavvadas and N. Makris, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93.

Seismic Response of Pacific Park Plaza. I: Data and Pre-liminary Analysis, M. Celebi and E. Şafak, ST June 92, p1547-1565.

Slope Stabilization Using In-Situ Earth Reinforcements, Seth L. Pearlman, Bradley D. Campbell and James L. Withiam, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1333-1348.

Soil-Pile-Superstructure System in Liquefaction, S. Yao and K. Kobayashi, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p241-255.

Soil/Structure Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p396-399.

Stability of Frames with Grade Beam and Soil Interac-tion, George Lin, EM Jan. 92, p125-139.

Polycrystalline CdTe Solar Cells for Large-Scale Space Applications, John Trefny, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p798-803.

Solar energy
Altering the Solar System—Landing the Moon, Mars or Venus on the Earth—Changing the Orbit, the Tilt and the Size of the Planet Earth, Alexander Abian, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2231-2240.

The Feasbility of Using Solar Optics for Lunar Base Lighting, Kyle Williams and David Eijadi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p260-275.

Lunar Based System to Supply Power to Earth: Summaray.

1992), p260-275.

Lunar-Based System to Supply Power to Earth: Summary of Concept, Benefits, and Development, David R. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2392-2399.

Polycrystalline CdTe Solar Cells for Large-Scale Space Applications, John Trefny, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p798-803.

# Solar radiation

Solar radiation

Estimation of Daytime Net Radiation Over Well-Watered Grass, A. Dong, S. R. Grattan, J. J. Carroll and C. R. K. Prashar, IR May/June 92, 9466-479.

In-situ Release of Solar Wind Gases from Lunar Soil, Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p537-546. Isotopic Separation of <sup>3</sup>He/<sup>4</sup>He From Solar Wind Gases Evolved from the Lunar Regolith, William R. Wilkes and Layton J. Wittenberg, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554. Very Low Frequency Radio Astronomy from Lunar

Very Low Frequency Radio Astronomy from Lunar Orbit, Nebojsa Duric, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1925-1934.

Solid waste disposal

Solid waste disposal

Environmental Aspects of Lunar Helium-3 Mining, G. L.

Kulcinski, E. N. Cameron, W. D. Carrier, III. and H.

H. (Jack) Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p606-616.

Landfill Storm Water Runoff Control, Paul Makowski
and Daniel Pazdersky, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p423-428.

Radiological Protection Criteria for Solid Radioactive
Waste Disposal, J. R. Cooper, I. M. Barraclough and S.
F. Mobbs, (High Level Radioactive Waste Management, Program Committee, 1992), p237-242.

Some Waste Materials in Road Construction, Salem D.

Ramaswamy and Mohammed A. Aziz, (Utilization of
Waste Materials in Civil Engineering Construction,
Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed.,
1992), p153-165.

Solid waste man

Solid waste management.
Baltimore City Recycling Program—A Case History,
George G. Balog, Kenneth J. Strong and Ellen L. Kobler, (Environmental Engineering: Saving a Threatened
Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p532-536.
Controlling the Flow of Recyclable Material, David L.
Snyder, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth
L. Bergeson, ed., 1992), p9-21.
Landfill-Cover Conflict. Teresta Austin CE Dec. 92, e70.

Landfill-Cover Conflict, Teresa Austin, CE Dec. 92, p70-

Mixed Broken Glass Processing Solutions, Nathiel G. Egosi, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p71-80.

Neutralysis: Lightweight Aggregate and Recycling, Robert S. Merdes, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p81-91.

Particle Motion in Rotary Screen, Richard Ian Stessel and S. C. Kranc, EM Mar. 92, p604-619.

S. C. Kranc, Em Mar. 92, p004-019.
Planning Centralized Materials Recovery Facilities, Renée A. Lawver and Jay R. Lund, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p537-542.

Solid Waste Management: The Extension Service Initiative, M. F. Dahab and W. E. Woldt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-548.

348. Solid Waste Travel Demand Model Using GIS and Simulation for Evaluating Site Impacts, Erin K. Bashaw and P. A. Koushki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p185-189.

Rouphail, ed. and T. C. Sutaria, ed., 1992), p103-102.

Solid wastes
Controlling Pulsed Incompressible Flow, Richard Ian Stessel, EY Apr. 92, p1-17.

Durability of MSW Fly-Ash Concrete, James R. Triano and Gregory C. Frantz, MT Nov. 92, p369-384.

Engineering Properties and Potential Uses of By-Product Phosphygypsum, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p250-263.

Hydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, Victor R. Hasfurther and John P. Turner, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p395-400.

MSW Incinerator Ash as Aggregate in Concrete and Ma-

MSW Incinerator Ash as Aggregate in Concrete and Masonry, Rosmadi Abdul Rashid and Gregory C. Frantz, MT Nov. 92, p353-368.

MT Nov. 92, p353-368.
Particle Motion in Rotary Screen, Richard Ian Stessel and S. C. Kranc, EM Mar. 92, p604-619.
Stability Evaluation of Waste Landfills, Richard A. Mitchell and James K. Mitchell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1152-1187.
Toxic Metals Reduction Process for Waste Sludge, Joseph G. Rabosky and Kashi Banerjee, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p388-393.
Use of Scrap Tires in Road Construction, Neil N. Eldin and Ahmed B. Senouci, CO Sept. 92, p561-576.

Solomication

Three Case Histories of Waste Stabilization, Edward L.

Kosinski, David S. Martin and Alan R. Ringen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1261-1272.

Unique Approach to Sludge Management, Suzanne L. Schweitzer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p262-268.

Adaptive and Parallel Methods for Nonlinear Solid Mechanics, T. Belytschko, L. P. Bindeman, H. Y. Chiang, E. J. Plaskacz and I. S. Yeh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p27-41.

Distributed Failure Analysis, Fallacies and Remedies, Kaspar Willam, Andreas Dietsche, Guillermo Etse and Paul Steinmann, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p772-775.

Lutes, ed. and John M. Niedzwecki, ed., 1992), p772-775.

The Influence of Moisture on Air Oxidation of UO; Calculations and Observations, Peter Taylor, Robert J. Lemire and Donald D. Wood, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1442-1448.

Mechanics of Growing Deformable Solids: A Review, V. E. Naumov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p510-513.

New Tools to Aid in Scientific Computing and Visualization, Michael G. Wallace and Tracy L. Christian-Frear, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p462-468.

Relationships Between Error Estimation and Adaptive Computations in Strain Localization, D. Aubry and B. Tie, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283.

Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Semprini and Paul V. Roberts, EE Sept./Oct. 92, p666-689.

Two-Dimensional Statistical Micromechanical Models for Microcracked Brittle Solids, K. H. Tseng and J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p361-364.

Wave Propagation in a Nonlocal Strain-Softening Continuum, Gilles Pijaudier-Cabot and Antonio Huerta, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p620-623.
Wave Propagation in Solids, A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

## dids flow

Solusi now Influence of Gas Phase Turbulence on the Transport of Particles, Jennifer L. Sinclair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042.

1992, p1039-1042.
Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu A. Patel and Burton D. Sklar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280.

# ditary wave

Three-Dimensional Scattering of Solitary Waves by Verti-cal Cylinder, Keh-Han Wang, Theodore Y. Wu and George T. Yates, WW Sept./Oct. 92, p551-566.

# Solubility

Spent Fuel, W. J. Gray and L. E. Thomas, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Fuel Radioactive Waste Management Program Committee, 1992), p1458-1464.

Metallurgical Residue for Solubilization of Metals from Sewage Sludge, D. Couillard and G. Mercier, EE Sept./ Oct. 92, p808-813.

Solubility of Uranyl in Brine, Hiromichi Yamazaki, Vas-silios Symeopoulos, Bo Lagerman and Gregory R. Choppin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1607-1611.

Solutes
Groundwater Quality Model with Applications to Various Aquifers, M. Soliman and A. Hassan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274.
Model for Pollutant Transport by Eddy Simulation, F. R.

Bhowmik, ed., 1992), p269-274.
Model for Pollutant Transport by Eddy Simulation, E. R.
Holley, Y. C. Su, G. H. Ward and R. de Souza, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598.
Movement of Nonpoint-Source Contaminants Through Heterogeneous Soils, John C. Tracy, IR Jan./Feb. 92, p88-103.
Non-Paint Source Pollution Due to Rupoff Over Sandy.

Non-Point Source Pollution Due to Runoff Over Sandy Soil, D. Payne, C. Richardson, A. D. Parr and K. Janish, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p439-444.

Linaweaver, ed., 1992), p439-444.
A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2,4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, P. S. Ho and W. F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p364-369.

Quantitative Comparison Between Colloidal and Solute Transport, J. Y. Chung and K. J. Lee, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Man p1966-1971.

p1966-1971.

Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Semprini and Paul V. Roberts, EE Sept./Oct. 92, p666-689.

Simulation of Two Approaches to Curb Potential Buildup of Nitrates in Groundwater, D. Adelman, S. Zheng and M. F. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p611-616.

A Study of Salt Transport Processes in Delaware Bay, Roy A. Walters, (Estuarine and Coastal Modeling, Maicolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p240-251.

Water Quality and Quantity Management in Connected

1992), p240-251.
Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.

Solutions
Corrosion Resistance of Stainless Steels and High Ni-Cr
Alloys to Acid Fluoride Wastes, H. D. Smith, K. H.
Pool, D. B. Mackey and E. B. Schwenk, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
620-631.

Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutants Entering the Back River Waste Water Treatment Plant, George G. Balog and Ralph O. Cullison, III., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed. 1992), p145-150.

Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Solvent Substitutes, Benerito S. Martinez, Ir., Ricardo B. Jacquez and Walter H. Zachritz, Il., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p169-174.

## Sorption

Conservative Tracers for the C-Well Hydraulic Testing, Tonya Dombrowski, Gary Coates and Klaus J. Stetzen-bach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1991-1996.

Effect of Solid-Phase Selectivity on Sorption of Cobalt and Strontium by Zeolitized Tuff, M. Gopala Rao, P. C. Das, E. U. Honga and A. E. Helou, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p1587-1592.

Field Analysis of Contaminated Sediments by Immunoas-say, Deborah J. Mossman, Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p110-115.

Removing Selenium(IV) and Arsenic(V) Oxyanions with Tailored Chelating Polymers, Anuradha Ramana and Arup K. Sengupta, EE Sept./Oct. 92, p755-775.

Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Sem-prini and Paul V. Roberts, EE Sept./Oct. 92, p666-689.

Theory and Experiments on Subsurface Contaminant Sorption Systems, Kirk Hatfield, David Burris, Thomas B. Stauffer and Joe Ziegler, EE May/June 92, p322-337.

## South Africa

Pavement Response Measuring System, M. de Beer, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p78-95.

Roller Compacted Concrete Arch/Gravity Dams—South African Experience, F. Hollingworth and J. J. Geringer, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p99-116.

Behavior of Urugua-I Dam, Andres C. Lorenzo and Silvio S. Calivari, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p272-290.

Construction of Urugua-I RCC Dam, Juan Buchas and Fotio Buchas, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p258-271.

Design and Proposed Construction Techniques for Pangue Dam, Brian A. Forbes, Dario Croquevielle B. and Hernan Zabaleta G., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p47-62.

Ecuador—The Lower Guayas Flood Control and Drain-age Project—A Case Study, Peter Wittenberg and Wal-ter Ochs, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p275-280.

Technology Transfer for Projects in South America, Joseph B. Summers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p209-214.

528

Space exploration

Advanced Construction Management for Lunar Base Construction—Surface Operation Planner, Robert J. Kehoe, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 546-1556.

Advances in Ground Operations for the Next Generation Space Launch Vehicle Programs, Mark Moeller and Space Launch Vehicle Programs, Mark Moeller and Space Lill, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pj 557-1566.

and Russell J. Miller, ed., 1992), p157-1566.
The Affordable Space Platform: The STS External Tank, Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p945-956.
Altering the Solar System—Landing the Moon, Mars or Venus on the Earth—Changing the Orbit, the Tilt and the Size of the Planet Earth, Alexander Abian, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2231-2240.
An Analysis of an Inflatable Module for Planetary Surfac-

Millett, ed., 1992, p.251-240...
An Analysis of an Inflatable Module for Planetary Surfaces, Paul S. Nowak, Willy Z. Sadeh and Marvin E. Criswell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p78-88.

Analysis of Space Crane Articulated Truss Joints, K. Chauncey Wu and Thomas R. Sutter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p320-331.

Apollo 11 Ilmenite Revisited, E. N. Cameron, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2423-2433.

Application of Large Infrastructure Project Financing to Construction Projects in Space, Michel Lyonnet du Moutier and Patrick Cohendet, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2196-2207.

Description of Open System Architecture to Plane-tary Surface Systems, D. A. Petri, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p469-482.

Applying Lessons from Extreme Environments to Solve Problems on Earth and in Space, Larry Bell, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p240-248.

Architectures for Mission Control at the Jet Propulsion Laboratory, Roger A. Davidson and Susan C. Murphy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1567-1578.

The Army Corps of Engineer's (ACE) Interaction with the Mission to Planet Earth Initiative, Robert C. Lozar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2094-2103.

Artificial Gravity Augmentation on the Moon and Mars, Lex Schultheis, [Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1738-1747.

and Russell J. Miller, ed., 1992, p.1730-1747.
Assessment of a SSF Servicing Facility, Rohan Zaveri, Scott Geels, Erlinda Kiefel, Dan Uhlig and Benton Clark, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.1668-1679.

Back to the Future: A Saturn V-Based Low Earth Orbital Transportation Node, Thomas J. Frieling, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p957-968.

Behavior of Compacted Lunar Simulants Using New Vacuum Triaxial Device, Chandra S. Desai, Hamid Saadatmanesh and Thomas Allen, AS Oct. 92, p425-

Beneficiation of Lunar Rocks and Regolith: Concepts and Difficulties, Lawrence A. Taylor and David S. McKay, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miler, ed., 1992), pl 058-1069.

Building a Space Infrastructure: The Reclamation Experience, Stephen L. Gillett, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p69-77. The Challenge of Constraining Mass for Planetary Construction, John F. Connolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p350-356.

530. Characterization of Emplacement Strategies for Lunar and Mars Missions, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1631-1644.

Miller, ed., 1992), p1631-1044.
Chemical Analysis in Space Exploration: A Lunar-based Chemical Analysis Laboratory (LBCAL), Mitchell K. Hobish, Charles W. Gehrke, Cyril Ponnamperuma and Robert W. Zumwalt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p565-575.

Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p565-575. Concept for a Lunar Array for Very Low Frequency Radio Astronomy, Kenneth A. Marsh, Michael J. Mahoney, Thomas B. H. Kuiper and Dayton L. Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1935-1940. Concrete Construction on the Moon, T. D. Lin and Nan Su, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1359-1369. Constructing Radiation Shields with Textiles for Lunar Applications, J. Lewis Dorrity and James W. Brazell (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-377. Construction and Development of a Human Base on Mars, Owen Gwynne, Yoji Ishikawa, Yukinobu Yamamoto, Hisateru Uyeda and Thomas Bongiovi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p389-99. Construction Challenges on Planetary Surfaces, H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p38-468. Construction of a Far-Term (2020-AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Mon-

Russell J. Miller, ed., 1992), p458-468.
Construction of a Far-Term (2020+AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Montoya and Ann Campbell, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p427-440.
Design and Technology Assessment of Three Lunar Habitat Concepts, Warren D. Hypes, Robert L. Wright and Marston J. Gould, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p249-259.
Design Concepts for a Lunar Electric Power System. Ken-

Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p774-785.

Miller, ed., 1992), p774-785.

The Design of a Permanent Lunar Research Station, James R. Thomas, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212.

Developing Technologies for Lunar-Based Astronomy, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1853-1864.

Significant of Lunar Construction, A Decivation of Research

Specialists in Space III, Willy Z. Sadeia, ed., 3eth Sture, ed. and Russell J. Miller, ed., 1992, p.1853-1864. Directions for Lunar Construction: A Derivation of Requirements from a Construction Scenario Analysis, William C. Dias, Subramani T. Venkataraman, Randel A. Lindemann, Jacob R. Matijevic, Jeffrey H. Smith and Richard R. Levin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p357-367. Dust Control Research for SEI, Kriss J. Kennedy and Defertey R. Harris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p398-407. The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, Marek-Jerzy Pindera and Alan D. Freed (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272.

Engineering, Construction, and Operations in Space III, 2 vols., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, 087262-868-X. 2513pp.
Enhancing Decision Analysis Techniques for Lunar Base Construction Research, Walter W. Boles and David B. Ashley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p341-349.
Evolution of the Space Station Freedom Module Pattern, Marston Gould, James Hendershot and Rudy Saucillo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p375-986.
Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-200.
Experimental Study of Underground Exploration by Auger Boring on a Mars Rover, Masaki Kojima, Kenji Saitou, Yutaka Kaneko and Nobuki Kawashima, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p416-426.
Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1680-1689.
Extraterestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillett and David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-1689.

Extraterestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillett and David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-1689.

Extraterestrial Resources: A Perspective from Terrestrial Economic Geology, Stephen L. Gillet

47.
Human Habitat Design for the Space Exploration Initiative, Robert Boyd, Scott Geels, Benton C. Clark and Carolyn Cooley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p25-33.
Hydrogen Reduction of Lunar Soil and Simulants, Robert O. Ness, Jr., Laura L. Sharp, David W. Brekke, Christian W. Knudsen and Michael A. Gibson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p617-628.
Hyperyelocity Impact Penetration Phenomena in Alumi-

hypervelocity Impact Penetration Phenomena in Alumi-num Space Structures, William P. Schonberg, AS July 90, p173-185.

100-Based Concept for Exploring Rover Autonomy, J. H. Allton and Damian Lyons, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2400-2411.

In Situ Recovery of Water from Dormant Comet Cores & CI Carbonaccous Chondrites, David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2367-2381.

Indigenous Planetary Construction Material Through Soil Modification, Leonhard E. Bernold, Yasuyuki Horie and Mark B. Boslough, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p493-503.

Inflation Concept Development for Inflatable Lunar Structures, Craig E. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p171-182.

sture, ed. ano Russeii J. Miller, ed., 1992), p171-182.
In-Flight Calibration of Mass Spectrometer, Dumitru Ristoiu, Gavrila Toderean, Iosif Chereji, Daniel Olimpiu Ursu and Vadim Glebovici Istomin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2264-2270.

The Initial Exploration of Mars: Rationale for a Return Mission to Chryse Planitia and the Viking I Lander, Robert A. Craddock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.1488-1499.

An Integrated Human/Plant Metabolic Mass Balance Model, A. B. Thompson, J. R. Schulz and C. G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1777-1788.

MITERLUNE Concept for Helium-3 Fusion Development, Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p804-814

Launching Facility Constraints on the Space Exploration Initiative, Kadett Chan and Alex J. Montoya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2044-2055.

Low Frequency Astronomy from Lunar Orbit, John P. Basart and Jack O. Burns, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1913-1924.

Stute, etc. and Russell J. Miller, etc., 1922, p. 1915-1924.

Lunar Base Pressure, Op Fraction, and ExtraHabitat Activity Suit Design, George W. Morgenthaler, Edward G. Barrett, Dale A. Fester and Carolyn G. Cooley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1720-1727.

Miller, ed., 1992), pt 120-121.

Lunar Base Requirements for Human Habitability, Gary T. Moore, Kerry L. Paruleski, Janis Huebner-Moths, Joseph P. Fieber and Patrick J. Rebholz, Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p224-239.

Neutrino Experiments, Jonathan V. Post, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2252-2263.

Lunar Habitats—Places for People, Robert Pfeifer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p183-188.

Lunar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992). p739-751.

Study, Paulo Roberto Pereira, Russell J. Miller and Gary S. Brierley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1195-1208.

Lunar Oasis, Michael B. Duke and John Niehoff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 948-68.

Lunar Oxygen—The Reduction of Glass by Hydrogen, Carlton C. Allen, David S. McKay and Richard V. Morris, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p629-640.

530

Lunar Resource Base, John Pulley, Todd K. Wise, Claude Roy and Phil Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p483-492. Lunar-Based System to Supply Power to Earth: Summary of Concept, Benefits, and Development, David R. Cris-well, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2392-2399.

A Mars 1 Watt Vortex Wind Energy Machine, Michael Ralston, Christopher Crowley, Ronald Thomson and Owen Gwynne, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-797.

Mars Basing, Brent Sherwood, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1964-1975.

Mars Containers: Dust on Teflon Sealing Surfaces, H. V.

pij964-1975.

Mars Containers: Dust on Teflon Sealing Surfaces, H. V. Lauer, Jr. and J. H. Allton, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, poßs-517.

Mars Mission Designs: Comparing the Near Term Options, Malcolm A. LeCompte and Julie P. Stets, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p726-738.

Mars Via the Moon—A Robust Lunar Resources-Based Architecture, Ed Repic and Wally McClure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1603-1630.

ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1603-1630. 
Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, Mark P. Nathan, Frank Barnes, Hon-Yim Ko and Stein Sture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-457. 
Materials and Structures Synerisitic with In-Space Materials and Structures Synerisitic with In-Space Materials.

1992), p441-457.

Materials and Structures Synergistic with In-Space Materials Utilization, Kumar Ramohalli, Farhang Shadman and K. R. Sridhar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p714-725.

Measuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, David W. Jensen and John M. Cory, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1273-1285.

Mechanical Properties of Lunar Soil and Simulactic

Valery V. Gromov and W. David Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p518-527.

Medical Care on the Moon, Ron Schaefer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1728-1737.

Metallized Microballoon EMI Shielding Materials, Boyle

Metallized Microballoon EMI Shielding Materials Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.
A Methodology for Development of Spaced-Based Assembly Operations, Sout Peppin, Jeff Morrow and Joel Loudenslager, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein John Charley, ed., and Russell J. Miller, ed., 1992), p1035-1047, ture, ed.

tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1035-1047.
Mitigation of Adverse Environmental Effects on Lunar-Bassed Astronomical Instruments, Charles L. Johnson, Kurtis L. Dietz, T. W. Armstrong and B. L. Colborn, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-1841.
Mitigation of Dust Contamination During EVA Operations on the Moon and Mars, Peter E. Glaser, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1512-1522.
Modular Robot Testbed, Chris Grasso, Wayne Jermstad, Mike Mathews, Jane Pavlich and Jim Avery, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453.
Multiple Booster Spaceports, Alan W. Arata, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2035-2043.

531

NASA's Future Plans for Space Astronomy and Astrophysics, Michael S. Kaplan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1789-1797.

A New Era in Space Operations, Simon P. Worden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

A Novel Aerobrake Design for a Mars Lander, John E. Crawford, Ralph G. Colbert and Manual I. Cruz, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p862-872.

On the Beneficiation and Comminution of Lunar Regolith, Larry W. Mason, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138.

On-Orbit Robotics Assembly and Operations of a Nuclear Mars Transfer System, W. J. G. Brimley, H. Kleinberg and H. H. Woo, (Engineering, Construction, and Operations In Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1413-1422.

An Operational Evaluation Process for Long-Duration Mission Habitats in Space, M. Novara, E. Raffner and D. Antonelli, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Operations Analysis for a Large Lunar Telescope, Christopher Thyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-1602.

Operations Ropace III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-1602.

Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-1602.

Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-1602.

Operations of Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-1602.

Phased As

ed., Stein Sture, ed. and Russell J., Willer, ed., 1992), p850-861.

Pilot Sounding Rocket Project Utilizing Student Labor, Sue A. Johnson, (Engineering, Construction, and Operations in Space III), Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2317-2327.

Piot-scale Field Experiment of Surface Hydrologic Processes with EOS Implications, Charles A. Laymon, Emir J. Macari and Nicholas C. Costes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2082-2093.

Polycrystalline CdTe Solar Cells for Large-Scale Space.

p2082-2093.

Polycrystalline CdTe Solar Cells for Large-Scale Space Applications, John Trefny, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p798-803.

Power Sources for Lunar Bases, Alastair J. W. Mayer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p763-773.

Pressure Suit Requirements for Moon and Mars EVA's, Eric M. Jones and Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1701-1708.

Production of Lunar Oxygen, Iron, Magnesium, and Sili-

Sautel, ed., State Stute, ed. and Kussel. J. Minler, ed., 1992), p1701-1708.

Production of Lunar Oxygen, Iron, Magnesium, and Silicon by Aqueous Hydrofluoric Acid Leaching, William N. Agosto, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p578-689.

Production of Oxygen by Electro-Reduction of Lunar Ores, B. Mishra, D. L. Olson, J. J. Moore and W. A. Averill, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677.

Projectile Shape and Material Effects in Hypervelocity Impact Response of Dual-Wall Structures, William P. Schonberg and Kent Darzi, AS Oct. 92, p405-424.

A Proposed Methodology for Ranking Space Resource Utilization Processes, R. D. Waldron and A. H. Cutler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p690-703.

The Proposed NASA Lunar-Based Astronomical Observatories, Paul N. Swanson, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 798-1808.

Regenerative Life Support Technology Challenges for the Space Exploration Initiative, Vincent J. Bilardo, Jr. and Ronald L. A. Theis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1748-1764.

Regulatory Law and Policy to Support Space Mining, Bruce S. Marks and William R. Sharp, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., Sadeh, ed., Stein St 1992), p2208-2219.

1992), p.2208-2219.
Reliability Analysis of Lunar Structures Under Meteoroid Impact, William M. Bulleit and Eric P. Steinberg, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p9-12.
Robotic On-Orbit Fueling of SEI Vehicles, Margaret M. Clarke, David E. Haines and A. J. Mauceri, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1423-1433.

Robotics in SEI Terrestrial Launch Site Operations, Brian S. Yamamoto, A. J. Mauceri and O. A. Chaikovsky, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1464-1474.

Rocket Full to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2271-2281.

Ropeway Material Handling Systems for Lunar Mining Sites, H. Peter Huttelmaier and Jonathan R. Carrick, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1116-1126.

Salvage Law for Outer Space, Wayne N. White, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422.

SEI In-Space Operations and Support Challenges, Ronald Caldwell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 476-1487.

The Small Mars Rover, A. L. Kemurdjian and V. V. Gro-mov, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p390-397.

Space Civil Engineering Option—A Progress Report, Marvin E. Criswell and Willy Z. Sadeh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2136-2146.

Space Education Day, D. O. Swint, M. E. McGuinness, W. R. Sharp, S. K. Swint, J. T. Curry, B. D. Bryant, L. A. Willar and S. Solari, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160.

Space Exposed Experiment Developed for Students, Doris K. Grigsby and Bob Melton, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2161-2171.

Space Habitat Contaminant Growth Models—Part II, G. J. Smith, T. McAdams, W. F. Ramirez and G. W. Moor genthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 370-1378.

Space Habitat Environmental Health: A Systems Issue, Jon R. Schulz and Ralph N. Eberhardt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2023-2034.

Space Station & Lunar/Mars Life Support Research, Win-ston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 690-1700.

Space-Based Assembly Sequence Formulation for Evalua-tion of Large Orbital Assemblies, Steve Jolly, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1530-1541.

MIMER, ed., 1992), p1530-1541.

Spaceborne Construction and Operations Planning: Decision Rules for Selecting EVA, Telerobot, and Combined Work-Systems, Jeffrey H. Smith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1988-1995.

Smith Microscopic Sture, ed., 2007

Spiral Mining for Lunar Volatiles, H. H. Schmitt, G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170.

Strength and Fracture of Glass in the Lunar Environ-ment, Daniel D. Allen, W. Howard Poisl and Brian D. Fabes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 232-1239.

Structural Characterization of an Articulated-Truss Joint, Thomas R. Sutter, K. Chauncey Wu, Kevin T. Riutort, Joseph B. Laufer and James E. Phelps, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p296-307.

1992), p.296-307.
Structural Design of the GN&C Navigation Base for the Space Station Freedom, Lavonia Grant and Fred Cutting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p839-849.

Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and H. Hawkins, Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564.

A Systems Approach to Water Recycling Research, Jon Schulz and JoAnn Silverstein, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1996-2007.

p1996-2007.

Systems Integration of Lunar Campsite Vehicles, Stephen Capps and Theron Ruff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p1976-1987.

Technical Issues for Lunar Base Structures, Brent Sherwood and Larry Toups, AS Apr. 92, p175-186.

Telerobotic Field Geologist: Preliminary Results of a Feasibility Study, Robert E. Cole, Charlotte Albert-Thenet, G. Jeffrey Taylor, Paul Johnson, Forrest Buzan, Joy Ishigo and Curtis Ikehara, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1434-1442.

Sture, ed. and Russell J. Miller, ed., 1972), p1437-1472. Tethers and Their Role in the Space Exploration Initiative, Cheryl D. Bankston, John A. Gilbert and Dennis R. Wingo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p897-908.

Towards a Spacefaring Civilization, Gordon R. Wood-cock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2008-2022.

Transfer of Terrestrial Technology for Lunar Mining, Robert A. Hall and Patricia A. Green, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1150-1161.

Tripod Crane Concept for Lunar Surface Construction, Haruyuki Namba and Martin M. Mikulas, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295.

Miller, ed., 1992), p284-295.
Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389.
Using a Lunar Base Scenario Context in Business Education, Cathleen S. Burns and Sherry K. Mills, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2172-2187.

Using Simulation to Evaluate On-Orbit Construction Operations, Todd C. Parfet, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2338-2350.

Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, D. W. Ming, D. C. Golden and D. L. Henninger, [Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1709-1719.

The Virtual Mission: A Step-Wise Approach to Large Space Missions, Elaine Hansen, Morgan Jones, Adrian Hooke and Richard Pomphrey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

pl 323-1239.

A Vision for Planetary Exploration, John F. Connolly, Robert K. Callaway, Mark K. Diogu, Gene R. Grush, E. Mason Lancaster, William C. Morgan, David A. Petri, Barney B. Roberts, Lester A. Pieniazek, Thomas M. Polette and Larry D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 23192-2192-2193. p2188-2195.

The Wide-Angle Optoelectronic Stereo Scanner WAOSS for the Soviet Mans 94/96 Missions, Rainer Sandau and Dieter Certel, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2241-2251.

Space frames

Buckling Analysis of Structures Composed of Tapered

Members, Siu Lai Chan, ST July 90, p1893-1906.

Members, Siu Lai Chan, ST July 90, p1893-1906.

Effect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p1796-1814.

Elastoplastic Nonlinear Analysis of Flexibly Jointed Space Frames, Faris G. A. Al-Bermani and Stritawat Kitipornchai, ST Jan. 92, p108-127.

Thin-Walled Space Frames. I: Large-Deformation Analysis Theory, Hong Chen and George E. Blandford, ST Aug. 91, p2499-2520.

Space probes

Altering the Solar System—Landing the Moon, Mars or Venus on the Earth—Changing the Orbit, the Tilt and the Size of the Planet Earth, Alexander Abian, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2231-2240.

Miller, ed., 1992), p.251-240.

Concept for a Lunar Array for Very Low Frequency Radio Astronomy, Kenneth A. Marsh, Michael J. Mahoney, Thomas B. H. Kuiper and Dayton L. Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1935-1940.

Miller, ed., 1922, p. 1935-1940.

In-Flight Calibration of Mass Spectrometer, Dumitru Ristoiu, Gavrila Toderean, tosif Chereji, Daniel Olimpiu Ursu and Vadim Glebovici Istomin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2264-2270.

Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chua, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1941-1951.

Russell J. Miller, ed., 1992), p1941-1951.

Low Frequency Astronomy from Lunar Orbit, John P.
Basart and Jack O. Burns, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1913-1924.

Lunar Farside, Mars Polar Cap, and Mercury Polar Cap Neutrino Experiments, Jonathan V. Post, (Engineerine, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2252-2263.

Amars, I. Watt Voter, Wind Engry, Machina, Michael

1892), p223-2-2203.
A Mars I Watt Vortex Wind Energy Machine, Michael Ralston, Christopher Crowley, Ronald Thomson and Owen Gwynne, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-797.

A New Era in Space Operations, Simon P. Worden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

On-Orbit Chipless Cutting and Tube Welding in Space Station Freedom, William R. Wessels, Mitchell D. Mulder and Brace B. Daniel, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p815-

Preliminary Investigation of a Lunar 16 Meter Optical Telescope, Walter H. Gerstle, N. N. V. Prasad, Kirk Cessac and Thomas Kratochvil, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2305-2316.

Very Low Frequency Radio Astronomy from Lunar Orbit, Nebojsa Duric, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1925-1934.

The Wide-Angle Optoelectronic Stereo Scanner WAOSS for the Soviet Mars 94/96 Missions, Rainer Sandau and Dieter Oertel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2241-2251.

Assessing Lunar Resources with Remote Sensing, Sandra C. Feldman and H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

Human Exploration of Mars: The Role of a Mars Outpost Laboratory, Michael B. Duke, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p43-

Lunar Farside, Mars Polar Cap, and Mercury Polar Cap Neutrino Experiments, Jonathan V. Post, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2252-2263.

A New Era in Space Operations, Simon P. Worden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

Salvage Law for Outer Space, Wayne N. White, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422.

# Space shuttle orbiter

Space I and Comparisons for the Next Generation Space Launch Vehicle Programs, Mark Moeller and Shelly Ewing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1557-1566.

Back to the Future: A Saturn V-Based Low Earth Orbital Transportation Node, Thomas J. Frieling, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p957-968.

Developing Technologies for Lunar-Based Astronomy, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1853-1864.

ESCAPE: Small Payload Strategies, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1542-1545.

The German Participation in the Soviet MARS 94/96 Mission, Klaus Proetel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2293-2304.

Launching Facility Constraints on the Space Exploration Initiative, Kadett Chan and Alex J. Montoya, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2044-2055.

On-Orbit Robotics Assembly and Operations of a Nuclear Mars Transfer System, W. J. G. Brimley, H. Kleinberg and H. H. Woo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1413-1422.

Orbital Construction of a NTR Mars Transfer Vehicle, Steve Jolly, Mike Loucks and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p987-998.

Reappraising the Space Shuttle Program, Roger A. Pielke, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2220-2230.

Tethers and Their Role in the Space Exploration Initiative, Cheryl D. Bankston, John A. Gilbert and Dennis R. Wingo, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p897-908.
Using Simulation to Evaluate On-Orbit Construction Operations, Todd C. Parfet, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2338-2350.

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ssues in Developing Control Zones for International Space Operations, Blair A. Nader and Kumar Krishen, AS Oct. 92, p387-404.

Projectile Shape and Material Effects in Hypervelocity Impact Response of Dual-Wall Structures, William P. Schonberg and Kent Darzi, AS Oct. 92, p405-424.

Schonberg and near Dealer.

Space structures

The Affordable Space Platform: The STS External Tank, Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p945-956.

An Analysis of an Inflatable Module for Planetary Surfaces, Paul S. Nowak, Willy Z. Sadeh and Marvin E. Criswell, (Engineering, Construction, and Operations in Space III., Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p78-88.

The Analysis Related to the Impact of Composite Panels, Ronald Perry, Anthony Palazotto and Raghbor Sandhu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1286-1296.

Application of Large Infrastructure Project Financing to

Application of Large Infrastructure Project Financing to Construction Projects in Space, Michel Lyonnet du Moutier and Patrick Cohendet, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2196-2207.

p2196-2207.
The Application of Open System Architecture to Planetary Surface Systems, D. A. Petri, L. A. Pieniazek and
L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p469-482.
Applying Lessons from Extreme Environments to Solve
Problems on Earth and in Space, Larry Bell, (Engineering, Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p240-248.
Assessment of a SSE Servicing Facility, Roben, Zaveri

1992), p240-248.

Assessment of a SSF Servicing Facility, Rohan Zaveri, Scott Geels, Erlinda Kiefel, Dan Uhig and Benton Clark, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1668-1679.

Back to the Future: A Saturn V-Based Low Earth Orbital Transportation Node, Thomas J. Frieling, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p957-968.

139.21, p937-908.
Building a Space Infrastructure: The Reclamation Experience, Stephen L. Gillett, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p69-77.
Cable Structures and Lunar Environment, Mohammed Ettouney, Haym Benaroya and Nissim Agassi, AS July 92, p297-310.

92, p27-310.
The Challenge of Constraining Mass for Planetary Construction, John F. Connolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p350-

Composite Materials for Structures on Planetary Surfaces, Donald W. Radford, Willy Z. Sadeh and Boyle C. Cheng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 297-1308.

Concept Evaluation Methodology for Extraterrestrial Habitats, Richard M. Drake and Philip J. Richter, AS July 92, p282-296.

 p.e.b.-zw.
 Conceptual Design of Modules for a Lunar Base, Edward R. Haninger and Philip J. Richter, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p100-111.

Concurrent Optimization of Large Structures. I: Algorithms, Hojjat Adeli and Osama Kamal, AS Jan. 92, p79-90.

Concurrent Optimization of Large Structures. II. Applica-tions, Hojjat Adeli and Osama Kamal, AS Jan. 92, p91-110. p91-110.

Construction and Development of a Human Base on Mars, Owen Gwynne, Yoji Ishikawa, Yukinobu Yamamoto, Hisateru Uyeda and Thomas Bongiovi, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p89-99.

Construction of a Far-Term (2020-AD) Lunar Base, James Wade, George W. Morgenthaler, Alex J. Montoya and Ann Campbell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p427-440.

Construction of Pressurged, Self-Supporting Membrane.

Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-281.

Cylindrical Fabric-Confined Soil Structures, Richard A. Harrison, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl.23-134.

Design and Construction Considerations for Lunar Outpost, H. Benaroya and M. Ettouney, AS July 92, p261-273.

273.

Design and Technology Assessment of Three Lunar Habitat Concepts, Warren D. Hypes, Robert L. Wright and Marston J. Gould, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.249-259.

Design Codes for Lunar Structures, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.1-12.

Design Concepts for a Lunar Concrete Production Facility, Richard M. Drake, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p.34-42.

Engineering Issues for Early Lunar-Based Telescopes,

Sture, ed. and Russell J. Miller, ed., 1992), p34-42. Engineering Issues for Early Lunar-Based Telescopes, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 22, p323-336. EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1656-1667. Evaluating Lunar Base Conceptual Designs, Brent Heleckson, Richard Johnson and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p213-223.
Evolution of the Space Station Freedom Module Pattern,

Russell J. Miller, ed., 1992, p.213-223.

Evolution of the Space Station Freedom Module Pattern,
Marston Gould, James Hendershot and Rudy Saucillo,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p975-986.

Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-200.

17921, p189-200.
A Facility for Training Space Station Astronauts, Ankur R. Hajare and James R. Schmidt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1645-1655.

The Feasbility of Using Solar Optics for Lunar Base Lighting, Kyle Williams and David Eijadi, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p260-275.

Geometric Modeling of Inflatable Structures for Lunar Base, Paul S. Nowak, Willy Z. Sadeh and Loretta A. Morroni, AS July 92, p311-322.

Morroni, AS July 92, p311-322.
The German Participation in the Soviet MARS 94/96
Mission, Klaus Proetel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p2293-2304.
Global Change: Geoengineering and Space Exploration, Lyle M. Jenkins, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2072-2081.

Graph-Theory Approach to Eigenvalue Problem of Large Space Structures, A. S. S. R. Reddy, AS Jan. 92, p70-78.

Hedratecture in Severe Climates, Joseph J. Mangan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 59-170.

Hypervelocity Impact Penetration Phenomena in Alumi-num Space Structures, William P. Schonberg, AS July 90, p173-185.

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Inflatable Structures of Non-Circular Cross Section, Eric E. Matsumoto, Shayan Pazargadi and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 47-158.

Lunar Base Requirements for Human Habitability, Gary T. Moore, Kerry L. Paruleski, Janis Huebner-Moths, Joseph P. Fieber and Patrick J. Rebholz, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p224-239.

Lunar Habitats—Places for People, Robert Pfeifer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p183-188.

Lunar Oasis, Michael B. Duke and John Niehoff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p48-68.

Lunar Resource Base, John Pulley, Todd K. Wise, Claude Roy and Phil Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p483-492.

Mechanical Equipment Requirements for Inflatable Lunar Structures, James M. Hines, Craig E. Miller and Richard M. Drake, AS Apr. 92, p248-256.

A Methodology for Development of Spaced-Based As-sembly Operations, Scott Peppin, Jeff Morrow and Joel Loudenslager, Chagineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1035-1047.

Nonlinear Analysis of Steel Space Structures, Ram Chandra, D. N. Trikha and Prem Krishna, ST Apr. 90,

pose-303.

On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.

On-Orbit Robotics Assembly and Operations of a Nuclear Mars Transfer System, W. J. G. Brimley, H. Kleinberg and H. H. Woo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1413-1422.

Operations Planning for Space Station FREEDOM—and Beyond, Stephen S. Gibson, Thomas E. Martin and H. Jeffrey Durham, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1500-1511.

Projectile Shape and Material Effects in Hypervelocity Impact Response of Dual-Wall Structures, William P. Schonberg and Kent Darzi, AS Oct. 92, p405-424.

Materials, John Amin Happel, Kaspar Willam and Benson Shing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p112-122.

Reliability Analysis of Lunar Structures Under Meteoroid Impact, William M. Bulleit and Eric P. Steinberg, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p9-12.

Response of Space Structures Under Sudden Local Damage, Ramesh B. Malla and Baihai Wang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p909-920.

Space Station & Lunar/Mars Life Support Research, Win-ston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1690-1700.

Space-Based Assembly Sequence Formulation for Evalua-tion of Large Orbital Assemblies, Steve Jolly, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1530-1541.

Spaceborne Construction and Operations Planning: Decision Rules for Selecting EVA, Telerobot, and Combined Work-Systems, Jeffrey H. Smith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1988-1995.

Structural Design Methodology of Large Space Struc-tures, Ralph J. Dornsife, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1022-1034.

Transient Analysis of Flexible Space Structures, D. L. Rice and E. C. Ting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p827-838.

Using a Lunar Base Scenario Context in Business Educa-tion, Cathleen S. Burns and Sherry K. Mills, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2172-2187.

## Spacecraft

An Analysis of Human Performance in Simulated Par-tial-Gravity Environments, Nathan R. Moore and David J. Gutierrez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2282-2292.

Stute, etc. and russell J. Prilinet, etc., 1972), page 222-222.

Scott Geels, Erlinda Kiefel, Dan Uhlig and Benton Clark, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1668-1679.

Directions for Lunar Construction: A Derivation of Requirements from a Construction Scenario Analysis, William C. Dias, Subramani T. Venkataraman, Rande A. Lindemann, Jacob R. Matijevic, Jeffrey H. Smith and Richard R. Levin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p357-367.

Dust Control Research for SEI, Kriss J. Kennedy and Jeffrey R. Harris, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p398-407.

EVA Operational Guidelines and Considerations for Use During the Space Station Freedom Design Review Process, Robert Trevino, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1656-1667.

The Feasibility of Processes for the Production of Oxygen on the Moon, Lawrence A. Taylor and W. David Carrier, III., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p752-762.

A Horizontal Inflatable Habitat for SEI, Kriss J. Kennedy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p135-146.

Human Habitat Design for the Space Exploration Initiative, Robert Boyd, Scott Geels, Benton C. Clark and Carolyn Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p25-33.

Hypervelocity Impact Penetration Phenomena in Alumi-num Space Structures, William P. Schonberg, AS July 90, p173-185.

Impact Craters on Cosmic Dust: Do Damage to the Spacecraft, Hanchang Peng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p969-

The Initial Exploration of Mars: Rationale for a Return Mission to Chryse Planitia and the Viking 1 Lander, Robert A. Craddock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1488-1499.

Lunar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992). p739-751.

A Mars 1 Watt Vortex Wind Energy Machine, Michael Ralston, Christopher Crowley, Ronald Thomson and Owen Gwynne, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-797.

Mars Mission Designs: Comparing the Near Term Options, Malcolm A. LeCompte and Julie P. Stets, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p726-738.

Mitigation of Dust Contamination During EVA Operations on the Moon and Mars, Peter E. Glaser, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1512-1522.

Modeling and Analysis of Doubly Curved Aerobrake Truss Structures, Gregory Washington and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p933-944.

A Novel Aerobrake Design for a Mars Lander, John E. Crawford, Ralph G. Colbert and Manual I. Cruz, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p862-872.

Object Oriented Spacecraft Architecture, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p23228-2337.

On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, Rick Varso, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1982, 986-896.

On-Orbit Chipless Cutting and Tube Welding in Space Station Freedom, William R. Wessels, Mitchell D. Mulder and Brace B. Daniel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p913-202.

Stein Sture, ed. and Russell J. Miller, ed., 1992), p815-826.

An Operational Evaluation Process for Long-Duration Mission Habitats in Space, M. Novara, E. Raffner and D. Antonelli, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1579-1590.

Optimizing Launch-on-Time Probability, George W. Morgenthaler, AS July 92, p369-386.

Orbital Construction of a NTR Mars Transfer Vehicle, Steve Jolly, Mike Loucks and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p987-998.

Pressure Suit Requirements for Moon and Mars EVA's, Eric M. Jones and Harrison H. Schmitt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1701-1708.

Robotic On-Orbit Fueling of SEI Vehicles, Margaret M. Clarke, David E. Haines and A. J. Mauceri, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1423-1433.

Rocket Fuel to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2271-2281.

Space Station & Lunar/Mars Life Support Research, Winston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2271-2281.

ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pp.2271-2281.

Space Station & Lunar/Mars Life Support Research, Winston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1690-1700.

Space-Based Assembly Sequence Formulation for Evaluation of Large Orbital Assemblies, Steve Jolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1530-1541.

Spaceborne Construction and Operations Planning Decision Rules for Selecting EVA. Telerobot, and Combined Work-Systems, Jeffrey H. Smith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1988-1995.

Structural Characterization of an Articulated-Truss Joint, Thomas R. Sutter, K. Chauncey Wu, Kevin T. Riutort, Joseph B. Laufer and James E. Phelps, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p296-307.

Structural Considerations in the Design of a Mars Mission Aerobrake, John Hairr and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p873-884.

Structural Studies of Two Aerobrake Heatshield Panel Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932. Tethers and Their Role in the Space Exploration Initiative, Cheryl D. Bankston, John A. Gilbert and Dennis R. Wingo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p891-908. Using Simulation to Evaluate On-Orbit Construction Operations, Todd C. Parfet, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2338-2350.

erations, Todd C. Parfet, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2338-2350. Spacecraft launching sites
Advances in Ground Operations for the Next Generation Space Launch Vehicle Programs, Mark Moeller and Shelly Ewing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1537-1566. Station, James R. Thomas, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212. Launch Facilities as Infrastructure, Mike Trial, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2046-2071. Launching Facility Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2046-2075.

Multiple Booster Spaceports, Alan W. Arata, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2035-2043.

New Era in Space Operations, Simon P. Worden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, Rick Vargo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, Rick Vargo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2035-2045.

Robotics in SEI Terrestrial Launch Site Operations, Brian S. Yamamoto, A. J. Mauceri and O. A. Chaikovsky, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2056-2063.

Structural Design of the GN&C Navi

Russell J. Miller, ed., 1992), ps.39-849.

Spacing
Design of Transient and Steady State Drain Spacing, Lyman S. Willardson and Masoud Alemi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p57-62.

Efficiency Formula for Pile Groups, Sayed M. Sayed and Reda M. Bakeer, GT Feb. 92, p278-299.

Seismic Response of Multianchored Retaining Walls, Thomas J. Siller and Dorothy D. Frawley, GT Nov. 92, p1787-1803.

p110-1003.

Spain
Greenhouse Irrigation Technology Transfer in Spain,
Elias Fereres, Francisco Orgaz, Nicolas Castilla and
Jose Lopez, (Irrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman,
ed., 1992), p215-220.

Mobile-Bed Physical Model Tests for the 1992 Olympic
Harbour, L. Moreno, C. Tamayo and J. Losada, (Civil
Engineering in the Oceans V, Robert T. Hudspeth, ed.,
1992), p840-849.

Snanish High Level Radioactive Waste Management Sys-

Spanish High Level Radioactive Waste Management Sys-tem Issues, J. M. Espejo and A. R. Beceiro, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

What a Place to Put a Landfill, CE June 92, p11.

Evaluation of Partial Depth Spall Repair Materials and Procedures, Arti J. Patel, David G. Peshkin and A. Russell Romine, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759.

Spatial analysis

GIS Analysis of Routes for Transportation of Hazardous Materials, Baxter E. Vieux and Madhusudan V. Kalyanapuram, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p168-173.

Goodino, ed. and Jeff R. Wright, ed., 1922, p. 106-175. Indicator Variography for Spatial Characterization of Aq-uifer Heterogeneities, M. V. Cromer and R. M. Srivas-tava, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p420-425.

Leveraging the Use of Geographic Information Systems in Highway Corridor Studies, David D. Metcaif and Mark R. Urban, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p174-181.

Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p582-589.

Multiple Subregion Allocation Models, Salah Benabdal-lah and Jeff R. Wright, UP Mar. 92, p24-40.

Response of Suspension and Deck Arch Bridges to Spa-tially Varying Ground Motion, Ronald S. Harichan-dran, Ahmad Hawwari and Basheer N. Sweidan, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p264-267.

SightPlan Model for Site Layout, I. D. Tommelein, R. E. Levitt and B. Hayes-Roth, CO Dec. 92, p749-766.

Site-Dependence of Spatial Coherency, Norman Abra-hamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.260-263.

ed., 1992), p.200-203.
Spatial Decision Support System for Toxic Spill Modeling in the Ohio River, Walter M. Grayman, Jason P. Heath and Richard M. Males, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p74-78.

Spatial Variability Effects on the Seismic Response of Models of Bridges, Aspasia Zerva, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p172-175.

Station Selection for Pooling Flood Data in a Densely Gauged Region of the UK, Duncan W. Reed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p25-30.

Variability Response Functions and Stochastic Field Discretization in Stochastic Finite Element Methods, Tsuyoshi Takada, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed.,

1992), p116-119.

Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, Walid Y. Thabet, Ayman A. Morad and Yvan J. Beliveau, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p727-736.

Beyond GIS: The Integrated Spatial Information System, Lania Rivamonte, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p825-832.

p823-934.

A GIS for Land Management, Majed Khalfallah, Salah Benabdallah, Naceur Chemam and Rached M'Hadbi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p929-933.

Computing Analysis, Research A. Quality, Analysis, Research

GIS for Transportation and Air Quality Analysis, Reginald R. Souleyrette, Shashi K. Sathisan, David E. James and Soon-tin Lim, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p182-194.

Hydrologic Parameter Estimation Using Geographic Information System, Nageshwar R. Bhaskar, Wesley P. James and Ravikumar S. Devulapalli, WR Sept./Oct. 92, p492-512.

Integrating Facility Delivery through Spatial Information, Teresa M. Adams, Alan P. Vonderohe, Jeffrey S. Russell and James L. Clapp, UP Mar. 92, p13-23. An Introduction to GIS, Lowell Kent Smith and Tracy Lenocker, CC Nov. 92, p1-6.

Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jea-nings, ed. and Nani G. Bhowmik, ed., 1992), p951

patial distribution

Spatial astrobustics of the Spatial Incoherence of the Seismic Ground Motions, Aspasia Zerva, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p560-563.

Site-Dependence of Spatial Coherency, Norman Abra-hamson and John Schneider, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p260-263.

Cu., 1792), p200-263.

Temporal and Spatial Distribution of Basaltic Volcanism in the Pancake and Reveille Ranges North of Yucca Mountain, K. A. Foland and S. C. Bergman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2366-2371.

Specialization

Limited View Limits Engineers (ltr), Ralph M. Hansen, CE Feb. 92, p32,35.

Specification

Specincatoons
AASHTO Bridge Design System—An Engineering Software with Formal Database Management, Roy A. Imbsen and Toorak Zokaie, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p663-670.

Commentary on Proposed Specification for Structural Steel Beams with Web Openings (with Design Example), ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3325-3349.

Consistency and Fairness in Geotextile Specifications, C. Joel Sprague and Marshall Gaddy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p288-298.

Contest Seeks Quality Specs, CE Oct. 92, p8.

Cylindrical Shell Redesign by Large Admissible Perturba-tions, Basem Alzahabi and Michael M. Bernitsas, (En-gineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p200-203.

The Diagnosis of Pavement Ills, J. B. Metcalf, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79.

Evaluation of Impact Factors for Horizontally Curved Steel Box Bridges, D. R. Schelling, N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221.

Externalizing Project-Specific Knowledge in Structural Design, Taufiq Rafiq and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p386-393.

Fiber: Good For the Concrete Diet? William C. Panarese, CE May 92, p44-47.

CE may 72, p44-47.
Implementation of Material Requirements in Specifications, Harvey C. Beckham and John R. Smith, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p428-433.
Improper Uses of Construction Specifications, Bryce Simons, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), n316-324.

p316-324

Improving Highway Specifications for Constructibility, J. T. O'Connor, F. Hugo and E. M. Stamm, CO June 91, p242-258.

Improving Specifications, Joseph Goldbloom, CE Sept. 92, p68-70.

Improving Stone Placement Specifications, David D. Sanders, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p58-63.

Performance Specifications for the Design and Manufac-ture of Energy Efficient Housing in the 21st Century, Ronald Kellett, Mark DeKay, Brook Muller, Donald Peting and G. Z. Brown, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p101-110.

Procedures for Evaluating Aggregate Gradation Specifica-tions, Edwin C. Novak, Ir., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), 9261-274.

537

Proper and Improper Use of Specifications, Ronald D Kulchak, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed. 1992), 9311-315.

Proposed Seismic Design Method for Piers and Wharves, Robert E. Harn and Bankim C. Mallick, (*Ports* '92, David Torseth, ed., 1992), p403-417.

Proposed Specification for Structural Steel Beams with Web Openings, ASCE Task Committee on Design Cri-teria for Composite Structures in Steel and Concrete, ST Dec. 92, p3315-3324.

Realistic Specifications for Manufactured Sand, Charles R. Marek, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p245-260.

Realistic Specifications for Steel Bridge Painting, Luh-Maan Chang and Machine Hsie, (Materials: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p299-310.

Reliability-Based Specification for Engineered Wood Construction, James R. Goodman, Allan G. Burk and David G. Pollock, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p73-77.

Return to Italy of Vitrified High Level Wastes from U.K.: Operational and Regulatory Aspects, G. F. Eletti, F. Michetti and M. Tocci, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p256-262.

Sampling Errors in U. S. Extreme Wind Records, Jon A. Peterka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p280-

Skull Object Space: Essential Knowledge Typologies for Proprietary Brand Name or Equal Specifications Inter-pretation, Jesus M. De La Garza and Gaye A. Oralkan, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p614-622.

Analytical Methods for the Determination of Correla-tions and Spectra of Nonlinear System Response, R. Valéry Roy and Pol D. Spanos, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p412-415.

Comparison of Wind Cross-Spectral Data with Models, N. P. Jones, A. Jain and R. H. Scanlan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p288-291.

Spectral analysis

Analysis of Behavior of Earth Dam Using Strong-Motion Earthquake Records, Mourad Zeshal and Ahmed M. Abdel-Ghaffar, GT Feb. 92, p266-277.

A Dual Approach to Low Frequency Energy Definition in a Small Craft Harbor, Chuck Mesa, (Coastal Engineer-ing Practice '92, Steven A. Hughes, ed., 1992), p400-

Fingerprint Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluorescence, Daniel York Pharr, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p579-584.

Frequency Spectrum Analysis of Ultrasonic Testing Sig-nal in Concrete, Wei-Du Li, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p104-114.

In-Flight Calibration of Mass Spectrometer, Dumitru Ristoiu, Gavrila Toderean, Iosif Chereji, Daniel Olimpiu Ursu and Vadim Glebovici Istomin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2264-2270.

Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelps, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p519-531.

ratures, 110mas D. White, ed., 1992), p519-531. Integrity Testing of Concrete Elements Using Surface Waves, B. R. Bowen, J. M. Roesset and K. H. Stokoe, II., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p952-955. Linear System Spectral Moments Determination, Pol D. Spanos and Socott M. Miller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p192-195.

Risk Consistent Estimate of Heat-Straightening Applica-tions. I: Plates, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409.

Risk Consistent Estimate of Heat-Straightening Applica-tions. II: Beams, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426. Seasonal Soil Strength by Spectral Analysis of Surface Waves, Bernard D. Alkire, CR Mar. 92, p22-38.

Spectral and Statistical Characteristics of Wind Waves
Off Canary Islands, Germán Rodríguez Rodríguez,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p622-636.

Spectral density function

Earthquake Ground Motion Modeling with Stochastic Line Source, Ruichong Zhang and Y. K. Lin, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p256-259.

Characteristics of High-Speed Runway Exits for Airport Design, Antonio A. Trani, Antoine G. Hobeika, Byung J. Kim, Hisao Tomita and David Middleton, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24.

Estimating Truck's Critical Cornering Speed and Factor of Safety, Francis P. D. Navin, TE Jan./Feb. 92, p130-

Speed changes Current Blockage Effects on Model-Scale Offshore Plat-form, Timothy D. Finnigan, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p294-310.

Geometric Characterization of Road Humps for Speed-Control Design, T. F. Fwa and L. S. Tan, TE July/Aug. 92, p593-598.

Image-Processing Techniques Applied to Road Problems, M. R. Wigan, TE Jan./Feb. 92, p62-83.

Granular Flow on a Bumpy Inclined Chute, Marijan Ba-bić, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1024-1027.

John M. Paledzwecki, ed., 1992.), p1024-1027.

Numerical Simulation of a Sphere Moving Down an Incline with Identical Spheres Placed Equally Apart, Chi-Hai Ling, Chyan-Deng Jan, Cheng-lung Chen and Hsieh Wen Shen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767

A Sphere Moving Down an Inclined Bumpy Surface, Chyan-Deng Jan, Hsieh Wen Shen, Chi-Hai Ling and Cheng-lung Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-771.

Unconfined Granular Materials Thermalized by Fluctu-ating Horizontal Surfaces, Mark W. Richman and Richard E. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p900-

Spherical shells

Classical Buckling Load of Spherical Domes Under Uniform Pressure, Haruo Kunieda, EM Aug. 92, p1513-

An Elasticity Solution for a Transversely Isotropic Mate-rial Containing a Spherical Shell Under Arbitrary Axi-symmetric Loading, J. -Y. Wang and S. M. Henrich, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1020-1023.

Inflation Concept Development for Inflatable Lunar Structures, Craig E. Miller, Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p171-182.

Spills

538

Analytical Prediction of Gasoline Thickness on the Water Table, M. Yavuz Corapcioglu, Rajasekhar Lingam and Vern K. Haisler, (Water Resources Planning and Mar-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p254-259

Effects of Viscosity on Migration of Spills of Hazardous Liquids, Joseph Capka and Edward A. McBean, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p784-789.

Minimizing the Risk and Impact of Tanker Accidents, C. S. Birt and A. J. Jordan, (Ports '92, David Torseth, ed., 1992), p670-681.

Models for Calculating Radionuclide Release from the Near Field, L. Romero, L. Nilson, L. Moreno and I. Neretnieks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-gram Committee, 1992), p954-959.

grain Committee, 1992), p73-4-939.
Spatial Decision Support System for Toxic Spill Modeling in the Ohio River, Walter M. Grayman, Jason P. Heath and Richard M. Males, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p74-78.

We Need to Integrate Water Transportation and Environ-mental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1922), p403-406.

Spillway capacity

Evaluating Spillway Adequacy, John K. Hawk, CE May 92, p74-76.

Rehabilitating Small Earth Embankments with RCC, Eric J. Ditchey, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992),

Spillways

Air Entrainment by Spillway Aerators, Peter Rutschmann and Willi H. Hager, HY June 90, p765-782.

Design of the Boney Falls RCC Emergency Spillway, W. J. Marold, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-

Design Storms for Emergency Spillways of SWM Ponds, Oner Yucel, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992, p934-939.

Drownproofing of Low Overflow Structures, Hans J. Leu-theusser and Warren M. Birk, HY Feb. 91, p205-213. Evaluating Spillway Adequacy, John K. Hawk, CE May 92, p74-76.

Flow and Energy Dissipation Over Stepped Gabion Weirs, L. Peyras, P. Royet and G. Degoutte, HY May 92, p707-717.

Fluctuating Uplift and Lining Design in Spillway Stilling Basins, Virgilio Fiorotto and Andrea Rinaldo, HY Apr. 92, p578-596.

HGL Elevation at Pipe Exit of USBR Type VI Impact Basin, Charles E. Rice and Kem C. Kadavy, HY July 91, p929-933.

Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, K. H. Frizell, (Roller Compacted Con-crete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439.

Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227.

May Issue Corners Engineers Concerns (ltr), Norman L. Rabbers, CE July 92, p32-33.

Optimum Channel Contraction for Supercritical Flows, P. Rutschmann, O. F. Jiménez and M. H. Chaudhry, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p754-759.

Overtopping Protection Alternatives for Dams, Noel R. Oswalt, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1210-1215.

Pipe Plunge Pool Energy Dissipator, Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323.

RCC for Rehabilitation of Dams in the USA-An Overview, Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p22-46.

ed., 1992), p22-46.

Santa Cruz Dam Modification, Megan Metcalf, Timothy
P. Dolen and Paul A. Hendricks, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p459-475.

Skimming Flow in Stepped Spillways, N. Rajaratnam, HY Apr. 90, p587-591.

HY Apr. 90, p387-391.

Spillway Design: Problems and Solutions, Shih-Tun Su, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p599-605.

Stability of Overtopped Embankment Dams, Ashok K. Chugh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p414-428.

Linform Aerated Chute Flow, Willi H. Hager, HY Apr.

Uniform Aerated Chute Flow, Willi H. Hager, HY Apr. 91, p528-533.

Splicing Splice/Development Length Requirements for FRP Grids Used in the Structural Reinforcement of Concrete, Edwin R. Schmeckpeper and Charles H. Goodspeed, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p632-644.

Spines

Estimating Pit-Excavation Volume Using Cubic Spline
Volume Formula, Chun-Sung Chen and Hung-Cheng
Lin, SU May 91, p51-66.

New Spline Finite Element for Plate Bending, S. C. Fan
and M. H. Luah, EM June 92, p1065-1082.

Splitting
The Durability of Rubble Mound Armour in Service—A
Case Study, Terry Piggott, Sam Smith and Angus Jackson, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p254-267.

Spoilers

Effect of Spoilers on Scour at Submarine Pipelines, YeeMeng Chiew, HY Sept. 92, p1311-1317.

Spreadsheets
BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 9906-911.

Design of Oak Point Link Railroad Trestle, Eugene Pollner and Kim Plumacher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809.

1972, pouz-ouy.

Electronic Spreadsheets in Structural Design, David O. Knuttunen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1187-

1194.
Low-Cost Computer Techniques for Steel Truss Bridge Rehabilitation and Ratings, Robert H. Kim and Jai B. Kim, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p786-793.

OUTFL—A Spreadsheet for Design of Adequate Storm Drainage Outfalls, Oner Yucel and Edward L. Lowman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p707-712.

Progressive Litegration of the Personal Computer, Into an

and valid C. Brownins, ed., 1922, p. 03-12.

Progressive Integration of the Personal Computer Into an Undergraduate Civil Engineering Curriculum, Thomas A. Lenox and Terry D. Hand, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p65-72.

Use of Wingz Spreadsheet as an Interface to Total-System Performance Assessment, W. F. Chambers and A. H. Treadway, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493.

Sprinkler irrigation

Cost Models for Preliminary Economic Evaluation of Sprinkler Irrigation Systems, D. Kumar, C. D. Heatwole, B. B. Ross and D. B. Taylor, IR Sept./Oct. 92, p757-775.

Design and Maintenance Factors Affecting Application Uniformity of Low Pressure Center-Pivot Irrigation Systems, Brian K. Briggs, K. James Fornstrom and Lar-ry Pochop, (Irrigation and Drainage: Saving a Threa-ened Resource—In Search of Solutions, Ted Engman, ened Resource-In Sed., 1992), p257-262

Working Conditions of Sprinkler to Optimize Applica-tion of Water, José Marí Tarjuelo Martín-Benito, Manuel Valiente Gómez and Juan Lozoya Pardo, IR Nov./Dec. 92, p895-913.

Sprinklers
Working Conditions of Sprinkler to Optimize Applica-tion of Water, José Mari Tarjuelo Martín-Benito, Manuel Valiente Gómez and Juan Lozoya Pardo, IR Nov/Dec. 92, p895-913.

Longshore-Transport Model for South Indian and Sri Lankan Coasts, P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-424.

Stability

Analysis of Slope Failure and Remedial Design of an Earth Dam, Michael J. Mann and Robert E. Snow, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p923-939.

Analytical Solution of Steady Seepage into Double-Walled Cofferdams, Sunirmal Banerjee and Angel Muleshkov, EM Mar. 92, p525-539.

Armor Stability on Submerged Breakwaters, Miguel Losa-

ieshkov, EM Mar. 92, p525-539.

Armor Stability on Submerged Breakwaters, Miguel Losada, Nobuhisa Kobayashi and Francisco L. Martín, WW Mar./Apr. 92, p207-212.

Branch Switching in Bifurcation of Structures, Fumio Fujii and Kok Keong Choong, EM Aug. 92, p1578-1596.

1396. Column Design in Steel Frames under Gravity Loads, Oscar de Buen, ST Oct. 92, p2928-2935. Comparison of ARS-Type Grade Control Model Testing and Prototype Response, C. Watson, N. Raphelt, P. Combs and S. Abt, [Hydraulic Engineering: Saving a Threatened Resourcs—In Search of Solutions, Marshall Jennings, ed. and Nami G. Bhowmik, ed., 1992), p213-218.

Comparison of Field and Laboratory Residual Strengths, Timothy D. Stark and Hisham T. Eid, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-

critical Review of Thin-Plate Stability Equations, John Platt, Gwynne Davies and Cyril Snell, EM Mar. 92, p481-495.

p481-495.

Design of the Charter Oak Bridge Embankments, Alec D. Smith, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p721-736.

Destabilizing Effect of Magnetic Damping in Plate Strip, Jong S. Lee, EM Jan. 92, p161-173.

Direct Tensile Test: Stability and Bifurcation, Zdeněk P. Bažant and Luigi Cedolini, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p357-360.

Dynamic Behavior of Nonlinear Cable System. B. S.

Mesarovic and D. A. Gasparini, EM May 92, p904-920.

Dynamic Behavior of Nonlinear Cable System. II, S. Mesarovic and D. A. Gasparini, EM May 92, p904-920.

Dynamic Elastic Plastic Buckling Behavior Illustrated by Simple Model, Yading Yue and Jijia Zheng, EM Oct. Plastic Streities.

92, p2005-2016.

Elastic Stability of Composite Column, Yaxin Li, EM Nov. 92, p2320-2327.

Engineering Mechanics, Loren D. Lut.s, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp.

Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, Kanwar Raj, M. S. Kumra and A. N. Prasad, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p899-903.

Field Performance and Analysis of Steep Riprap, Guy Lefebvre, Karol Rohan, Mahrez Ben Belfaßhel and Oscar Dascal, GT Sept. 92, p1431-1448.

Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p912-915.

Force Deformation Equations for Initially Curved Later-

Force Deformation Equations for Initially Curved Laterally Loaded Beam Columns, R. E. McConnel, EM July 92, p1287-1302.

Forecasting the Space-Time Stability of Radioactive Waste isolation in Sail Formations, E. B. Anderson, A. I. Karelin, A. S. Krivokhatsiy and V. G. Savonenkov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2114-2121.

mittee, 1992), p2114-2121.
FS-1.5: Is it Appropriate for Embankment Design? Scott A. Ashford, Lawrence H. Roth, Sandra L. Madsen and Donald G. Anderson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1112-1125.
Fundamental Observations on Cement Based Grouts (1): Traditional Materials, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p474-485.
Fundamental Observations on Cement Based Grouts (2):

Fundamental Observations on Cement Based Grouts (2): Microfine Cements and The Cemili® Process, B. De Paoli, B. Bosso, R. Granata and D. A. Bruce, Grouting, Soil Improvement and Geosynthesics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p486-499.

Generalized Three-Dimensional Slope-Stability Analysis, Dov Leshchinsky and Ching-Chuan Huang, GT Nov. 92, p1748-1764.

94, pt 149-149. Hydraugers at the Via de Las Olas Landslide, W. H. Roth, R. H. Rice, D. T. Liu and J. Cobarrubias, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-1364

1304.
The Influence of Moisture on Air Oxidation of UO2: Calculations and Observations, Peter Taylor, Robert J.
Lemire and Donald D. Wood, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1442-1448.
Instability of Slopes with Nonassociated Flow, Poul V.
Lade, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), p288-291.
Investigation of Parametrically-Induced Excitation in

John M. Niedzwecki, ed., 1992), p288-291.
Investigation of Parametrically-Induced Excitation in Concrete Columns, Nader Ghafoori and Kambiz Farhang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1051-1054.
Lunar Transit Telescope Lander Design, Husam A. Omar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1880-1889.
Modern Approach to Design of Grassed Channels, N. Kouwen, IR Sept./Oct. 92, p733-743.
Momentum and Enercy Coefficients Based on Power-Momentum and Enercy Coefficients Based on Power-

Momentum and Energy Coefficients Based on Power-Law Velocity Profile, Cheng-lung Chen, HY Nov. 92, p1571-1584.

New Stability Equation for Columns in Braced Frames, Raul Goncalves S., ST July 92, p1853-1870.

Kaul Goncaives S., ST July 92, p1835-1870.
Nonlinear Stability Analysis of Steel Members by Finite Element Method, Zuyan Shen and Qilin Zhang, EM Mar. 92, p445-461.
Nonlinear Stability of Differential Surge Chambers, Xiao-Liang Yang and Chen-Shan Kung, HY Nov. 92, p1526-1539.

p1526-1539.
Optimal Design of Structures with Kinematic Nonlinear
Behavior, S. Pezeshk, EM Apr. 92, p702-720.
Out-of-Plane Strengths of Steel Beams, S. Bild, G. Chen
and N. S. Trahair, ST Aug. 92, p1987-2003.
Performance of an Embankment Dam With Partial Cutoff, Pascual H. Perazzo and Tauseef I. Choudry, (Stability and Performance of Slopes and Embankments II,
Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p1022-1032.

1992, p1022-1092. Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hult-gren, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p773-787. Phase Stability of Simulated Nuclear Waste Glasses, I. Joseph, T. V. Palmiter and L. D. Pye, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p011-916.

py11-916.

Physical Model Testing of Broken Armor Stone, Donald L. Ward, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p34-39.

Prebuckling Deflections and Lateral Buckling. J: Theory, Yong Lin Pi and N. S. Trahair, ST Nov. 92, p2949-2966.

Prebuckling Deflections and Lateral Buckling. II: Applications, Yong Lin Pi and N. S. Trahair, ST Nov. 92,

p.5907-2983.

Re-examination of Vlinen and Other Column Equations,
John J. Zahn, ST Oct. 92, p2716-2728.

Reliability Analysis of Plates with Initial Deflection by
Entropy Model, Miyamura Atsunori, Kohama Yoshiro
and Takada Toyofumi, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992, p559-562.

Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p559-562.

Reliability of Controlled Structures Subject to Real Parameter Uncertainties, B. F. Spencer, Jr., C. Montemagno, M. K. Sain and P. M. Sain, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p369-372.

Riprap Stability Under Impinging Flow, James R. Leech, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p138.

Schifflerized Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1520-1936.

Scour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Seismic Anlaysis and Design of Lined Waste Fills: Current Practice, Raymond B. Seed, ed. and Nani G. Bhowmik, ed., 1992), p54-69.

Soltening Models for Concrete: Stability and Uniqueness Donald R. Curran, James K. Gran, Lynn Seaman and Tarabay H. Antoun, (Engineering Mechanics, Loren D. Lutes, ed. and John N. Niedzwecki, ed., 1992), p36-372.

Stability of Accropode(R) and Comparison with Paral-

372

Lutes, ed. and John M. Niedzwecki, ed., 1992), p369372.

Stability of Accropode(R) and Comparison with Parallelepipedic Block, Braulio G. Madrigal and José Lozano, (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p704-717.

Stability of Beams in Eccentrically Braced Frames, M. D.
Engelhardt, K. C. Tsai and E. P. Popov, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p1043-1046.

Stability of Column Lowered Into Liquid of Higher Density, C. Y. Wang, EM Jan. 92, p204-210.

Stability of Order Deverous Column Column Comparison of Masonry Piers and Arches, Thomas E. Boothby and Colin B. Brown, EM Feb. 92, p367-383.

Stability of Overtopped Embankment Dams, Ashok K.
Chugh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p414-428.

Stability of Rock Armour Under Random Wave Attack:
Performance of Non-Standard Rock Shapes and Gradings, A. P. Bradbury and N. W. H. Allsop, (Durability
of Stone for Rubble Mound Breakwaters, Orville T.

Magoon, ed. and William F. Baird, ed., 1992), p64-81.

Stability of Systems of Rigid Bodies by Bounding Theorems, Thomas E. Boothby, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p904-907.

Stability Froblems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller. (Hydraulic Em-

1992), p904-907.

Stability Problems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p846-851.

Stability Theory of Cohesive Crack Model, Yuan N. Li and Robert Y. Liang, EM Mar. 92, p587-603.

Stable Controllers for Instantaneous Optimal Control, J. N. Yang, Z. Li and S. C. Liu, EM Mug. 92, p1612-1630.

Static Instability and Liquefaction of Loose Fine Sandy Slopes, Poul V. Lade, GT Jan. 92, p51-71.

Statistical Analysis of Formulas for Breakwater Armor Layer Design, Kalin Nikolov Koev, WW Mar./Apr. 92, p213-219.

Stiffness Expressions for Element with Central and End Springs, R. E. McConnel and A. I. El-Sheikh, ST Apr. 92, p955-969.

y2, py35-y69.
 Strength and Behavior of Slender Steel Pipe under Prestressing Force, Zenon A. Zielinski and Hamid Mobasher-Fard, ST Oct. 92, p2911-2926.
 Structural Control Design in the Presence of Time Delays, P. M. Sain, B. F. Spencer, Jr., M. K. Sain and J. Suhardjo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815.

Texas Bridge Scour Evaluation Program, Stephen B. Olo-na, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), p70-75. Theoretical Study of Stability Criteria for X-Bracing Sys-tems, Dong Q. Wang and Arthur P. Boresi, EM July 92, p1357-1364.

p1357-1364.
Time-Delay Effect on Dynamic Response of Actively
Controlled Structures, Surjit S. Dhillon and William C.
Lennox, AS Oct. 92, p450-464.
Total Stress Analysis of Cantilever Sheetpiling in Layered
Clay, Jay S. DeNatale and German A. Ibarra-Encinas,
GT July 92, p1064-1082.

Waste Glass and Sewage Sludge Frit Use in Asphalt Pavements, Warren H. Chesner, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p296-307.

Water-Level Control in Hydropower Plants, Oscar F. Jiménez and M. Hanif Chaudhry, EY Dec. 92, p180-

Wave-Motion Stability in Canals with Automatic Con-trollers, Simion Hancu and Paul Dan, HY Dec. 92, p1621-1638.

bility analysis

Stability analysis
Availability of Shear Strength Reduction Technique,
Tamotsu Matsui and Ka-Ching San, (Stability and Performance of Slopes and Embankments II, Raymond B.
Seed, ed. and Ross W. Boulanger, ed., 1992), p445-460.
A Benchmark Slope Stability Study, Jose L. M. Clemente,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p1520.

II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1520.
 Bifurcations and Chaos in Structural Control, K. Hackl, A. Cheng, C. Y. Yang and M. Chajes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p664-667.
 Case History Evaluating Field Vane Correction Factors, W. Andrew Herlache, Craig A. Hall, Shahriar Vahdani and Henry T. Taylor, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, p737-755.
 Cause and Mechanism of Failure Kettleman Hills Landfill B-19, Phase LA, R. John Byrne, J. Kendall and S. Brown, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p178-1215.
 Comparison of Rigorous Slope Stability Methods: Statical Aspects, Dow Leshchinsky, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1070.
 Conditions for Initiation of Rainfall-Induced Debris Flows, Nicholas Sitar, Scott A. Anderson and Kenneth A. Johnson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p184-194.
 A Design Method for Reinforced Clay Embankments Of Stopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, p1981-1492.
 Discrete Element Method for Slope Stability Analysis.

1492. Discrete Element Method for Slope Stability Analysis, Ching S. Chang, GT Dec. 92, p1889-1905. An Embankment on Soft Clay With an Adjacent Cut, Walter Steiner, Richard Metzger and W. Allen Marr, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720. Finite Element Analysis of Thin-Walled Curved Beams Made of Composites, G. S. Palani and Sundaramoorthy Rajasekaran, ST Aug. 92, p2399-2062. Flexural-Torsional Stability of Thin-Walled Columns, Juha Paavola and Seppo Salonen, EM Dec. 92, p2384-2400.

2400.
Fully Coupled Unsteady Mobile Boundary Flow Model (FCM), Luís R.P. Correia, Bommanna G. Krishnappan and Walter H. Graf, HY Mar. 92, p476-494.
Generalized Slope Stability Analysis: Interpretation, Modification, and Comparison, Dov Leshchinsky and Ching-Chuan Huang, GT Oct. 92, p1559-1576.
Geosynthetic Reinforced Soil Structures, Dov Leshchinsky and Ralph H. Boedeker, GT Oct. 89, p1459-1478.
Inflation Instability of Cylindrical Membranes, Baoqing Yu, William A. Nash and Thomas J. Lardner, (Engineering Merchanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p916-919.

Interactive Slope Analysis Using Spencer's Method, Sunil Sharma and Abdul Moudud, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p506-520.

Johnston Fund Grows at Lehigh, CE May 92, p82.

Kettleman Hills Waste Landfill Slope Failure. I: Liner-System Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668.

Mapping Slope Failure Potential Using Fuzzy Sets, C. H. Juang, D. H. Lee and C. Sheu, GT Mar. 92, p475-494.

Mcchanism of a Landsilide Caused by Rainfall, Masami Fukuoka, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p342-357.

Post-Earthquake Slope Stability of Two Dams with Liquefied Gravel Foundations, D. W. Sykora, J. P. Koester, R. E. Wahl and M. E. Hynes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005.

Probabilistic Stability Analysis for Deep-Water Founda-tion, Knut O. Ronold and Steinar Bysveen, GT Mar. 92, p394-405.

iliability and Probability in Stability Analysis, John T. Christian, Charles C. Ladd and Gregory B. Baecher, Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,

II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1071-1111.
The Role of Benchmark Problems in Slope Stability Computations, Stephen G. Wright, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1067-1069.
Seismic Assessment of Tailings Dams, Thomas G. Harper, Harvey N. McLeod and Michael P. Davies, CE Dec. 92, p64-66.
Seismic Stability Analysis of Landfill, Max Y. Ma, Albert T. Yeung and An-Bin Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724.
Slope Stability Analysis: Generalized Approach. Double Stability Analysis: Generalized Approach.

17724, p721-724.
Stope Stability Analysis: Generalized Approach, Dov Leshchinsky, GT May 90, p851-867.
Stability Analysis in Geomechanics by Linear Programming. II: Application, Poon-Hwei Chuang, GT Nov. 92, p1716-1726.

Stability Analysis in Geomechanics by Linear Program-ming. I: Formulation, Poon-Hwei Chuang, GT Nov. 92, p1696-1715.

Stability Analysis of a Municipal Solid Waste Landfill, Jonathan D. Howland and Arvid O. Landva, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p1216-1231.

pt210-1231.

Stability Analysis of an Earth Slope, T. William Lambe and Francisco Silva-Tulla, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p27-69.

Stability Analysis of Reinforced Embankments on Soft Soils, Shenbaga R. Kaniraj and Hasan Abdullah, GT Dec. 92, p1994-1999.

Dec. 92, p1994-1999.
Stability and Closure Design for a Landfill on Soft Clay and Peat, Richard A. Mitchell, Sybil E. Hatch and Ronald A. Siegel, (Stability and Performance of Sloper and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p685-704.
Stability Evaluation During Staged Construction, Charles C. Ladd, GT Apr. 91, p540-615.
Stability Evaluation of an Old Dam With a Known History of Slide, Sukhmander Singh and Robert D. Darragh, Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049.

1992), p1033-1049.

1992), p1033-1049.

Stability Evaluation of Waste Landfills, Richard A. Mitchell and James K. Mitchell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1152-1187.

Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1030-1065.

Stability of Built-up Columns, Atle Gjelsvik, EM June 91, p1331-1345.

Stability of Concrete Gravity Dams with Drained and Fi-nite Cracks, Bernard Amadei and Tissa Illangasekare, EY Dec. 92, p149-163.

Stability of Frames with Grade Beam and Soil Interac-tion, George Lin, EM Jan. 92, p125-139.

Stability of the Olga C Test Embankment, J. G. Lavallée, G. St-Arnaud, R. Gervais and Y. Hammamiji, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p1006-1021.

p1000-1021.

Stabilization of Tablachaca Dam Landslide, Richard A
Millet, Gil M. Lawton, Pedro C. Repetto and Vinod K.
Garga, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p1365-1381.

Steady-State Strength Analysis of Lower San Fernando
Dam Slide, Gonzalo Castro, Raymond B. Seed, Thomas O. Keller and H. Bolton Seed, GT Mar. 92, p406427.

Strength Correlation Factor for Residual Soils, N. Lo-ganathan, Suraj de Silva and A. Thurairajah, GT Apr. 92, p593-610.

92, p593-610.
A Study of Slope Stability Analysis, R. J. Deschamps and G. A. Leonards, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p267-291.
Subsurface Characterization and Design of an Ash Landfill on Varved Clays, Siamac Vaghar, Stanley M. Bemben and Markus Walbaum, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803.
Undrained Shear Strength of Liquefied Sands for Stability Analysis, Timothy D. Stark and Gholamreza Mesri, GT Nov. 92, p1727-1747.
Use of Reliability Methods for the Sequential Analysis of

G1 Nov. 92, p1727-1747.

Use of Reliability Methods for the Sequential Analysis of a Small Dam, Eric C. Drumm, Richard M. Bennett and William E. Manrod, III., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1126-1136.

UTEXAS3 Example Problems, Earl V. Edris, Jr. and Dale F. Munger, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066.

Stability criteria

Stability criteria
Dutch Experience on Design of Dikes and Revetments,
Krystian W. Pilarczyk, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p794-813.
Vedernikov's Number as a Measure of Flow Stability,
Cheng-lung Chen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p753.

Stabilization (Alkaline Sludge Stabilization: A "Quick Fix" and Long Term Sludge Management Option for Burlington, North Carolina, Stephen R. Shoaf, Morris V. Brookhart and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p399-

Alkaline Sludge Stabilization Processes Offer Viable Sludge Management Options, Gary S. MacConnell, Morris V. Brookhart and Philip E Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p394-398.

1992), p394-398.
Application of EPS for Slide Correction, Shan-Tai Yeh and John B. Gilmore, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1444-1456.
Cement-Stabilized Soil for Coal Retaining Berms, Gary J. Van Riessen and Kenneth D. Hansen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p981-992 992.

Engineering Properties and Potential Uses of By-Product Phosphygypsum, Ramzi Taha and Roger Seals, (Utili-zation of Waste Materials in Civil Engineering Con-struction, Hilary 1. Inyang, ed. and Kenneth L. Berge-son, ed., 1992), p250-263.

Ground Improvement of Rubbish Dump Over Reclaimed Tin Mine, Aziz Mustafa and Mohd Raihan Taha, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 324-1331.

1992, p1324-1331. Hybrid Grouting Techdniques to Stabilize a Weakly Cemented Sandstone at King Talal Dam, Jordan, B. A. Anthony, M. P. Bruen, R. R. Mann and Z. Alem, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p577-587.

Minipile Milestone in Memphis, Loren D. Flick, A. E. "Ted" Graham, Michael J. Marasa, Nigel B. R. Osborn and Frank T. Tobey, Ill., CE Sept. 92, p46-49.
Postcrack Scaling Relations for Fiber Reinforced Cementitious Composites, Victor C. L., MT Feb. 92, p41-57.
Slide Stabilization with Stone-Fill Trenches, George L. Sills and Robert L. Fleming, Ir., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1382-1394.
Soft Clay Subgrade Stabilization Using Geocells, S. Y. Mhaiskar and J. N. Mandal, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1092-1103.
Some Factors Related to Injected Shape in Grouting, Akira Mori, Masahito Tamura, Hideaki Shibata and Hideo Hayashi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p313-324.
South Jetty Scour Hole Stabilization, Ocean City, Maryland, Gregory P. Bass and Edward T. Fulford, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p583-597.
Stability and Performance of Slopes and Embankments

ability and Performance of Slopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, 0-87262-872-8, 1574pp.

1992, 0-87262-872-8, 1574pp.
Stabilization of Pier Foundation Using Jet Grouting Techniques, R. Parry-Davies, R. M. H. Bruin, G. Wardle and M. G. Nixon, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 56-168.
Stabilization of Tablachaca Dam Landslide, Richard A. Millet, Gil M. Lawton, Pedro C. Repetto and Vinod K. Garga, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), pl 365-1381.
Stabilized Active, Clav. Ps. Sand. Admisture. Pat. T. Stabilized Active. Clav. Ps. Sand. Admisture.

Stabilized Active Clay by Sand Admixture, Pat T. Leelani, Maen M. Shaar and Phil V. Compton, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1042-1053.

Stabilizing Compacted Clay Against Chemical Attack, Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567.

90, p1549-1567.
Stabilizing Drop Structure by Drainage Modifications, Larry D. Armer, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p39-44 sate Stabilization, Edward L. Kosinski, David S. Martin and Alan R. Ringen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1261-1272.
The Use of Flue Gas Desulfurization Geostom in Civil

den, ed., Robert O. Holtz, ed. and han Juran, ed., 1992), p1261-1272.

The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.

Utilization of Waste Sulfur in Construction Materials and as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, William C. McBee, Frank E. Ward, William T. Dohner and Harold Weber, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p116-127.

Wanaque Filtration Plant Subgrade Stabilization—A Case History, Joseph D. Chastanet and Paul M. Blakita, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p265-274.

Design of a Threshold Channel, Gregorio Vigilar, Jr. and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p729-734.

Hydraulic Geometry of Threshold Channels, Panayie Diplas and Gregorio Vigilar, HY Apr. 92, p597-614.

Play Ball: Oriole Park at Camden Yards Set to Open, CE Apr. 92, p15.

Seismically Safe, Spectator-Friendly, Charles H. Thornton, Thomas Z. Scarangello and Chris Christoforou, CE Feb. 92, p32-54.

To Clarify and Correct (ltr), CE June 92, p37.

Stagnation point
The Flow in the Front Stagnation Region of a Square
Plate with a Small Disturbing Wire in its Upstream, T.
C. Su and Q. X. Lian, (Engineering Mechanics, Loren
D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
p470-473.
Similarity Solutions of Starting Jets and Starting Plumes,
Vincent H. Chu, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p600-

Stainless steel
ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1036-1070.

Corrosion Resistance of Stainless Steels and High Ni-Cr Alloys to Acid Fluoride Wastes, H. D. Smith, K. H. Pool, D. B. Mackey and E. B. Schwenk, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e302-632. p620-627

Development Status of the GA-4 and GA-9 Casks, Robert M. Grenier, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1832-1838.

A Face-Lift for Lincoln, Peter L. Rinaldi and Andrea Giorgi Bocker, CE Sept. 92, p62-64. Steel Alloy Aids Pennsylvania Bridge, CE Dec. 92, p88.

Damage of Entryway Stairs due to Settlement of Gravel Backfill, Robert W. Day, CF May 92, p121-124.

Standard penetration tests

Bearing Capacity of Expanded-Base Piles in Sand, Wil-liam J. Neely, GT Jan. 90, p73-87.

Bearing Capacity of Expanded-Base Piles with Compact-ed Concrete Shafts, William J. Neely, GT Sept. 90, p1309-1324.

Are Existing Traffic Methodologies Realistic? Nelson B. Nuckles, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p211-216. Boston's City within a City, Paul Tarricone, CE Oct. 92,

p40-43

CAD and the Corps, B. Ray Summerell, Kevin Carrigan and Jamie B. Wrenn, CE June 92, p52-54. List of Sea-State Parameters, IAHR Working Group on Wave Generation and Analysis, WW Nov./Dec. 89,

p793-808.

RCC Test Specimen Preparation—Developments Toward a Standard Method, Terrence E. Arnold, Theodore B. Feldsher and Kenneth D. Hansen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p341-357.

Traffic Impact Analysis Standardization—The Orange County, California Experience, Steve Hogan, Jerry Ingram and Kari Rigoni, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p99-103.

Traffic Impact Studies—Current Practices from Cities' Perspective, Daniel B. Rathbone, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p109-113.

Uniform Traffic Impact Assessment Studies—A Case

Uniform Traffic Impact Assessment Studies—A Case History of Riverside County, California, Lawrence A. Toerper, Site Impact Traffic Assessmen: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p114-117.

ASCE LRFD Method for Stainless Steel Structures, Shin-Hua Lin, Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1056-1070.

ASME Pressure Vessel Code Application to Nuclear Waste Container Design, Mohamed B. Trabia and Mark Kiley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1244-1252.

Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, B. L. Broadhead, C. V. Parks and R. B. Pope, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181.

Automatic Generation of Simulation Codes in Construc-tion, Ali Touran, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1050-1057

1057. Equivalence to 1,000 MTHM of Spent Fuel: Application of 40 CFR Part 191 to Other Wastes, Neil J. Numark and Suzanne R. Phelps, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1074-1081. Implementation of Material Requirements in Specifications, Harvey C. Beckham and John R. Smith, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p428-433.

An Inside Look at the 40 CFR 191 Containment Requirements, Floyd L. Galpin, Raymond L. Clark and Caroline Petti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1047-1054.

Internationalization of Engineering Professions, N. D. Birrell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p983-1005.

Inventory of Highway Infrastructure Problems Through Bridge Inspection, Enno Koehn and N. A. Barroeta, El Apr. 91, p133-149.

Metrication Between Canada and the USA—A Staged Adoption, George E. Maddox, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p590-593.

morn, 1eu Engman, ed., 1992), p590-593.
Metrication of Construction—A Message to the American Society of Civil Engineers, Thomas R. Rutherford, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p577-583.

New ASCE Standards Activities Under Way, CE Sept. 92, p78,80.

Object-Oriented Model of Engineering Design Standards, James H. Garrett, Jr. and M. Maher Hakim, CP July 92, p323-347.

On Deciding Between the Use of Engineering Standards and Risk Analysis, George W. Annandale, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, p219-235.

kniv, ed., 1992), p219-235.
Palm Beach County Traffic Impact Analysis—A Prototype, Joseph B. Pollock, Jr. and Jacob Wattenberg,
(Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and
T. C. Sutaria, ed., 1992), p104-108.
Polyolefin Plastic Water Service Line Performance,
Richard E. Chambers, (Materials: Performance and
Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p585-597.

white, ed., 1992, p. g. Risk Assessment of Engineering Standards: Toward a Decision Framework, Leonard Shabman, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p40-51.

Standard Methodologies for the Forensic Investigation of Pavements, James O'Kon, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p31-38.

Standard of Care for Delivery of Engineered Products, James C. Porter, El Apr. 90, p193-201.

Uncertainty in Regulatory Decision-Making, D. Fehr-inger and S. Coplan, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p106-109.

United States Metrication and the EC 92, A. I. Johnson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p571-576.

Wind Loads on Buildings with Sawtooth Roofs, Patrick J. Saathoff and Theodore Stathopoulos, ST Feb. 92, p429-446

State agencies

Impact of Present Data Validation Practices on Risk Assessment of Hazardous Waste Sites, V. Balasundaram, C. Minch and N. Shashidhara, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p567-574.

Quantification of Agency and User Values of Pavement Performance, T. F. Fwa and K. C. Sinha, TE Jan/Feb. 92, p84-98.

Water Management Under Drought Conditions: An Overview of Practices by Non-Federal Entities, Darrell G. Fontane and Donald Frevent, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p354-359.

tate aid

Study Analyzes New Jersey Infrastructure Needs, CE Feb. 92, p24,26.

State government
Negotiating the Voluntary Siting of Nuclear Waste Facilities—An Impossible Mission Made Possible, Robert M. Mussler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1565-1566.

tate laws

Connecticut's Wellhead Protection Program, Fred S. Banach, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), 92-97.

Court Claims Wyoming City Prefers Too Much, CE May

92, p28.

92, p.28.
Ground Water Management in Arkansas, Jonathan Ray Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p110-115.
Pay As You Grow, Teresa Austin, CE Feb. 92, p64-65.
A Proposed Revised State Zoning Enabling Act, George W. Liebmann, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p91-100.
State Permit Program and Toxics Individual Control Strategies: A Case Study, Altaf A. Memon, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p561-566.

State planning
Elements of Effective State Land-Use Planning Policy,
Arthur C. Nelson, UP Sept. 92, p97-105.
Strategic Planning for Transportation Under the NWPA:
A State Perspective, Douglas Larson and Jim Miernyk,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1730-1736.

State-of-the-art reviews

Effects of Sea-Level Rise on Bays and Estuaries, ASCE
Task Committee on Sea-Level Rise and Its Effects on
Bays and Estuaries, HY Jan. 92, pl-10.

Emerging Issues in Transportation Facilities Management, Sue McNeil, Michael Markow, Lance Neumann,
Jeffrey Ordway and Donald Uzarski, Te July/Aug. 92,
p477-495.

Environmental Impacts of Agricultural Drainage, R. W. Skaggs, M. A. Breve and J. W. Gilliam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1922), p19-24.

Gottechs Revisit Slopes, Embankments, CE Sept. 92,

Jet Grouting: State-of-the-Practice, J. L. Kauschinger, E. B. Perry and R. Hankour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p169-181.

Holtz, ed. and Ilan Juran, ed., 1992), p169-181.
Radiation Energy Treatment of Water, Wastewater and Sludge: A State-of-the-Art Report, Task Committee on Radiation Energy Treatment, Air and Radiation Management Committee, Environmental Engineering Division, (Paul Kruger, chmn.), 1992, 0-87262-901-5, 5297.
The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, Bernard H. Hertlein, (Materials: Performance and Prevention of Deficiencies and Fallures, Thomas D. White, ed., 1992), p80-91.
State of the Art in Other Ocean Energy Sources, Richard J. Seymour and Preston Lowrey, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p258-275.
The State of the Art in Tidal Power Recovery, J. Gavin

The State of the Art in Tidal Power Recovery, J. Gavin Warnock and Robert H. Clark, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p4-33.

p4-33.
State of the Art in Wave Power Recovery. A. Douglas Carmichael and Johannes Falnes, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p182-212.
State-of-the-Art: Static Stability and Deformation Analysis, J. Michael Duncan, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p222-266.

Water's New World, Laura Lang, CE June 92, p48-50.

Water's New World, Laura Lang, CE June 92, p48-50.
Static loads
Evaluation of Flowable Fly-Ash Backfill. I: Static Loading, Richard D. Peindf, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p499-463.
Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, N. Navayogarajah, C. S. Desai and P. D. Kiousis, EM May 92, p990-1011.
On a Procedure to Estimate the Reliability of Mechanical Components, G. I. Schuëller, C. G. Bucher and H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p451-454.
Pavement Response Measuring System. M. de Beer.

avement Response Measuring System, M. de Beer, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p78-95.

1992), p78-95.

Performance of Precast Driven Piles in Marine Clay, Chun F. Leung, R. Radhakrishnan and Siew-Ann Tan, GT Apr. 91, p637-657.

Response of Plates of Arbitrary Shape Subject to Static Loading, K. M. Liew, EM Sept. 92, p1783-1794.

Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771.

Static structural analysis
Analytical Solutions for Thick, Doubly Curved, Laminated Shells, Jiarang Fan and Juyong Zhang, EM July 92, p1338-1356

pl 338-1356. Mutual Residual Energy Method for Parameter Estimation in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, ST Jan. 92, p223-242. Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079.

Energy Dissipation Characteristics of Rubber Cylinders, Dean L. Sicking, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p139-

142.

Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultruded Fiber-Reinforced Plastics Beams in Industrial Building Construction, Ethan A. Love and Tanongsak Bisarnsin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584.

Pile Installation and Testing at Ningbo Port, China, Raymond J. Castelli and Alexander Matlin, (Ports '92, David Torseth, ed., 1992), p214-227.

Statics

Statics
Comparison of Rigorous Slope Stability Methods: Statical Aspects, Dov Leshchinsky, (Stability and Performance of Slopes and Embankments 11, Raymond B. Sed, ed. and Ross W. Boulanger, ed., 1992), p1070.
On the Diffusional Stress Transmission, Włodzimierz Brząksła, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p175-178.

Stationary Processes
Nonstationary Response Characteristics of Linear MDOF Systems, K. Papadimitriou and J. L. Beck, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p572-575.
Generalize Cystems to Short Duration Sto-

Niedzwecki, ed., 1992), p572-575.
Response of Secondary Systems to Short Duration Stochastic Input, R. Sinha and T. Igusa, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p447-450.
Slepian Process of a Non-stationary Process, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p296-2001.

299.
Statistical analysis
Compaction Quality Control in Granular Shell of Earth
Dam, Panaghiotis C. Kotzias and Aris C. Stamatopoulos, GT Aug. 92, p1247-1255.
Dealing with Uncertainty: From Health-Risk Assessment
to Environmental Decision Making, Anthony L. Cox,
Jr. and Paolo F. Ricci, EY Aug. 92, p77-94.
Effect of Drought on Urban Water Supplies. I: Drought
Analysis, David M. Frick, Dennis Bode and Jose D. Salas, HY June 90, p733-753.
Fluctuating Uplift and Lining Design in Spillway Stilling
Basins, Virgilio Fiorotto and Andrea Rinaldo, HY Apr.
92, p578-596.

Geotechnical Database Manipulation to Effect Stochastic Analysis, James M. Keane, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p224-227. Improved Techniques in Regression-Based Streamflow Volume Forecasting, David C. Garen, WR Nov/Dec.

92, p654-670.

92, p654-670.

Information Theory in Risk Analysis, James D. Englehardt and Jay R. Lund, EE Nov./Dec. 92, p890-904.

Micromechanical Model to Predict Sand Densification by Cyclic Straining, Ricardo Dobry and Emmanuel Petrakis, EM Feb. 90, p288-308.

Modeling Input Data for Construction Simulation, Simaan M. AbouRizk and Daniel W. Halpin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1147-1154.

New Look at Regional Flood-Froqueprey Relations for

New Look at Regional Flood-Frequency Relations for Arid Lands, Hjalmar W. Hjalmarson and Blakemore E. Thomas, HY June 92, p868-886.

Nonparametric Framework for Long-Range Streamflow Forecasting, J. A. Smith, G. N. Day and M. D. Kane, WR Jan./Feb. 92, p82-92.

Power Flow and Energy in Primary-Secondary Systems, G. Chen and T. T. Soong, EM May 92, p1046-1051. Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441. QSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, N. H. Tang, D. J. W. Blum, R. E. Speece and N. Nirmalakhandan, EE Jan./Feb. 92, p17-37. Reliability Analysis of Partially Restrained Steel Connections, Gregory L. Tucker and Richard M. Bennett, ST Apr. 90, p1090-1101. Retention Parameter Estimates for Curve Number Runoff Procedure, W. Carlisle Mills, Adrian W. Thomas, Anthony L. Dillard and Willard M. Snyder, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p372-377. Robust Testing Procedure for Detection of Multiple Blunders, Y. Gao, E. J. Krakiwsky and J. Czompo, SU Feb. 92, p11-23.

Blunders, Y. Ga Feb. 92, p11-23.

Short-Duration Rainfalls in Sicily, Giovanni B. Ferreri and Vito Ferro, HY Mar. 90, p430-435.

and vito Ferro, HY Mar. 90, p430-435.
Spectral and Statistical Characteristics of Wind Waves
Off Canary Islands, Germán Rodríguez Rodríguez,
(Civil Engineering in the Oceans V, Robert T,
Hudspeth, ed., 1992), p622-636.
Statistical Analysis of Formulas for Breakwater Armor
Layer Dessign, Kalin Nikolov Koev, WW Mar./Apr. 92,
p213-219.

Statistical Analysis of Slender Composite Beam-Column Strength, S. A. Mirza and B. W. Skrabek, ST May 92, p1312-1332. pl 312-1322.

Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warner, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-720.

Statistical Evaluation of Mechanistic Water-Quality Models, Kenneth H. Reckhow, J. Trevor Clements and Randall C. Dodd, EE Mar./Apr. 90, p250-268.

Truck Loading Data for a Probabilistic Bridge Live Load Model, Dan M. Frangopol, George G. Goble and Nuthan Tan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-

Variability in Compaction Control, Iraj Noorany, GT July 90, p1132-1136.

Variations in Measured Resilient Modulus of Asphalt Mixes, Faisal H. Al-Sugair and Jamal A. Almudaiheem, MT Nov. 92, p343-352.

Statistical data
Bridge Overloading Criteria, Michel Ghosn, (Probabilistic
Mechanics and Structural and Geotechnical Reliability,
Y. K. Lin, ed., 1992), p575-578.

Fabric Related Probabilistic Model for Granular Materials, Jamshid Jahedi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p475-478. Point-Estimate Method for Calculating Statistical Moments, K. S. Li, EM July 92, p1506-1511. Study Looks to the Past to Change the Future, CE Feb. 92, p23.

Statistical distributions
Engineering Analysis of Extreme Value Data: Selection of
Models, Enrique Castillo and José María Sarabia, WW
Mar/Apr. 92, p129-146.
Mar/Apr. 92, p129-146.

Monte Carlo Technique with Correlated Random Variables, Ali Touran and Edward P. Wiser, CO June 92, p258-272.

Separation of Skewness: Reality or Regional Artifact?
Fahim Ashkar, Bernard Bobee and Jacques Bernier,
HY Mar. 92, p460-475.

Statistical Properties of Construction Duration Data, Simaan M. AbouRizk and Daniel W. Halpin, CO Sept. 92, p525-544.

Aeration at Ohio River Basin Navigation Dams, Steven F. Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens and George H. Taylor, EE Mar/Apr. 90, p361-375.

A Criticism of Statistical Methods in Probabilistic Models in Structural Reliability, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p236-239.

Engineered Barrier System Failure Modeling: A Statisti-cal Approach, Daniel B. Bullen, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p401-408

Engineering Analysis of Extreme Value Data: Selection of Models, Enrique Castillo and José María Sarabia, WW Mar./Apr. 92, p129-146.

Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, GT May 90, p774-789.

Extremal Wave Statistics Using Three Hindcasts, Robert M. Wyland and Edward B. Thornton, WW Jan./Feb. 91, p60-74.

Sea Floor Wave-Induced Water Kinematics for Design of Pipeline, Leon Borgman and Robert Hudspeth, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p444-466.

Shear Resistance Models for Concrete Bridges, Ahmed S. Yamani and Andrzej S. Nowak, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

A Statistical Method for the Reliability of Mechanical Components, Karl Breitung. (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p440-442.

60., 1992), pa40-42.
Two-Dimensional Statistical Micromechanical Models for Microcracked Brittle Solids, K. H. Tseng and J. W. Ju, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p361-364.

Bayesian Reliability Updating of Existing Steel Girder Bridges, Sami W. Tabsh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p55-58.

Critical Buckling Load Statistics of an Uncertain Col-umn, Garrett D. Jeong, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p563-566.

1992, p303-300.
Distribution of Wetland Hydrologic Parameters, Misganaw Demissie and Abdul Khan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p470-475.
Engineering Analysis of Extreme Value Data: Selection of Models, Enrique Castillo and José María Sarabia, WW

Mar./Apr. 92, p129-146.

Evaluation of Expansive Clay Soils in Tucson, Arizona, Mark W. Brooks and Edward A. Nowatzki, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p220-223.

Financial Performance Analysis for Construction Indus-try, Roozbeh Kangari, Foad Farid and Hesham M. El-gharib, CO June 92, p349-361.

High Order Statistics in Structural Reliability, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p244-

Impact of Flow Variability on Error in Estimation of Tributary Mass Loads, Stephen D. Preston, Victor J. Bierman, Jr. and Stephen E. Silliman, EE May/June 92, p402-419.

Level of Significance Selection in Engineering Analysis, Kaye L. Brubaker and Richard H. McCuen, El Oct. 90, p375-387.

Macro Wind Parameters for Load Combination, Christo-pher A. Belk and Richard M. Bennett, ST Sept. 91, pher A. Bell p2742-2756.

Nonstationary Response of Structures with Closely Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.

Orthometric Heights from Global Positioning System, Jerome Fiedler, SU Aug. 92, p70-79.

Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166.

Regional Frequency Analysis Using L-Moments, J. R. M. Hosking and J. R. Wallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p13-18.

Reliability Model for Soil Liner: Post Construction, I. Bo-gardi, W. E. Kelly and A. Bardossy, GT Oct. 90, p1502-1520.

Review of Geostatistics in Geohydrology: I. Basic Concepts, ASCE Task Committee on Geostatistical Techniques in Geohydrology of the Ground Water Hydrology Committee of the ASCE Hydraulics Division, HY May 90, p612-632.

Review of Ground-Water Quality Monitoring Network Design, Hugo A. Loaiciga, Randall J. Charbeneau, Lorne G. Everett, Graham E. Fogg, Benjamin F. Hobbs and Shahrokh Rouhani, HY Jan. 92, pl.1-37.

Simulation of Improved Gaussian Time History, Loren D. Lutes and Jin Wang, EM Jan. 91, p218-224.

D. Lutes and Jin Wang, Em. 181. 71, p219-22-3.
Simulation-Based Excursion Statistics, Gordon A. Fenton and Erik H. Vanmarcke, EM June 92, p1129-1145.
Station Selection for Pooling Flood Data in a Densely Gauged Region of the UK, Duncan W. Reed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p25-30.

Flow Dynamics in an End-to-End Vascular Graft Junction, Y. H. Kim and K. B. Chandran, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p964-967.

Normal-Depth Calculations in Complex Channel Sections, Edward D. Shirley and Vicente L. Lopes, IR Mar./Apr. 91, p220-232.

SCS Water Surface Profile Model—WSP2, William H. Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p859-864.

Steady and Unsteady Flow Profiles in Reclamation, Curtis J. Orvis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p872-871.

Steady state

Design of Transient and Steady State Drain Spacing, Lyman S. Willardson and Masoud Alemi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p57-62.

Minimum Undrained Strength of Two Sands, J.-M. Kon-rad, GT June 90, p932-947.

Minimum Undrained Strength Versus Steady-State Strength of Sands, J. -M. Konrad, GT June 90, p948-

Multiple Modes of Steady-State Slide-Rock Response, Harry W. Shenton, III. and Nicholas P. Jones, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p312-315.

Steady State Composition with Low Fe<sup>2+</sup> Concentrations for Efficient O<sub>2</sub> Production by "Magma" Electrolysis of Lunar Soils, Larry A. Haskin and Russell O. Colson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p651-665.

Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, EM Aug. 92, p1661-1678.

Steady-State Strength Analysis of Lower San Fernando Dam Slide, Gonzalo Castro, Raymond B. Seed, Thom-as O. Keller and H. Bolton Seed, GT Mar. 92, p406-427.

Uncertainty in Steady-State Liquefaction Evaluation Pro-cedures, Steven L. Kramer, GT Oct. 89, p1402-1419.

846

Steel Beam-Column Behavior of Fabricated Steel Tubular Members, H. G. L. Prion and P. C. Birkemoe, ST May 92, p1213-1232.
Bond Strength in Battened Composite Columns, Yasser M. Hunaiti, ST Mar. 91, p699-714.
Commentary on Proposed Specification for Structural Steel Beams with Web Openings (with Design Example), ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3325-3349.
Corresion Cracking in Relation to Bar Diameter. Cover.

 p3, p3325-3349.
 corrosion Cracking in Relation to Bar Diameter, Cover, and Concrete Quality, Rasheeduzzafar, S. S. Al-Saadoun and A. S. Al-Gahtani, MT Nov. 22, p327-342.
 Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, E. Smailos and R. Köster, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1676-1680.

tive Waste wanagement Program Committee, 1972), p1676-1680.

Cracking Response of RC Members Subjected to Uniaxial Tension, Gaetano Russo and Filippo Romano, ST May 92, p1172-1190.

Creep Effects in Composite Beams with Flexible Shear Connectors, Angelo Marcello Tarantino and Luigino Dezi, ST Aug. 92, p2063-2081.

Design of Latticed Steel Transmission Structures (ANSI/ASCE 10-90) (St No. 90-010), Standards Committee for Design of Steel Transmission Towers, American Society of Civil Engineers, (Edwin H. Gaylord, chmn.), 1992, 0-87262-858-2, 64pp.

Double Diamonds: New Brand for a Texas Bridge, Thomas G. Lovett and Dennis W. Warren, CE Apr. 92, p42-45.

Ductile Multiple-Anchor Steel-to-Concrete Connections, Ronald A. Cook and Richard E. Klingner, ST June 92, p1645-1665.
Effect of Strain Rate on Cold-Formed Steel Stub Col-umns, M. Kassar, C. L. Pan and W. W. Yu, ST Nov. 92, p3151-3168.

Effect of Strain Rate on Material Properties of Sheet Steels, M. Kassar and W. W. Yu, ST Nov. 92, p3136-3150.

Staluation of Impact Factors for Horizontally Curved Steel Box Bridges, D. R. Schelling, N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221.

Experience with NRC Licensing of a Dual Purpose Cask, Ivan Stuart, Todd Lesser and Marvin Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 100021-321325 1992), p1231-1235.

1992), p1231-1253.
Experimental Performance of Long Links in Eccentrically Braced Frames, M. D. Engelhardt and E. P. Popov, ST Nov. 92, p3067-3088.
Fatigue Strength of Welded Joints Under Broadband Loadings, David P. Kihl, Shahram Sarkani and James A. Kuny, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p428-

High-Temperature Properties of Fire-Resistant Steel for Buildings, Y. Sakumoto, T. Yamaguchi, M. Ohashi and H. Saito, ST Feb. 92, p392-407.

H. Satto, S.I Feb. 92, p. 592-407.
H. Satto, S.I Feb. 92, p. 602-407.
Hybrid (FRP-Steel) Reinforcement for Concrete Structures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p. 655-665.
Incorporating Corrosion in Reliability-Based Design of Anchored Bulkheads, M. J. S. Roth, T. C. Sandford and H. J. Dagher, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p. 1661-163.

p160-163.

Inelastic Limit States Design. Part I: Planar Frame Studies, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2532-2549.

G. Detertein, S1 Sept. 92, 2532-2594.
Inelastic Limit States Design. Part II: Three-Dimensional Frame Study, Ronald D. Ziemian, William McGuire and Gregory G. Deierlein, ST Sept. 92, p2590-2568.
Influence of ADAS Element Parameters on Building Seismic Response, Chuan Xia and Robert D. Hanson, ST July 92, p1903-1918.

Laboratory Testing of Ultimate Capacity of Dented Tu-bular Members, Einar Landet and Inge Lotsberg, ST Apr. 92, p1071-1089. Nonlinear Analysis of Steel Space Structures, Ram Chan-dra, D. N. Trikha and Prem Krishna, ST Apr. 90, p898-909.

p898-909.

Nonlinear Stability Analysis of Steel Members by Finite Element Method, Zuyan Shen and Qilin Zhang, EM Mar. 92, p445-461.

Parametric Study of Continuous Prestressed Composite Girders, Wenxia Tong and Hamid Saadatmaneh, ST Jan. 92, p186-206.

Girders, Wenxia Tong and Hamid Saadatmanesh, ST Jan. 92, p186-206. Performance of Orthotropic Bridge Decks, Ali Touran and Alex Okereke, CF May 91, p134-148. PREPS: Analysis of Pipe Supports and Other Structures on the PC-386, Gregory Nakhimovsky and Charles E. Doherty, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p543-550. Prestressed Composite Girders. I: Experimental Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2763-2762. Prestressed Composite Girders. II: Analytical Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2763-2783. Proposed Specification for Structural Steel Beams with Web Openings, ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3315-3324.
Pullout Tests Using Steel Grid Reinforcements with Low-Quality Backfill, Dennes T. Bergado, Kam-Hung Lo, Jin-Chun Chai, Ramaiah Shivashankar, Marolo C. Alfaro and Loren R. Anderson, GT July 92, p1047-1063.

1063

1063.
Reliability Analysis of Partially Restrained Steel Connections, Gregory L. Tucker and Richard M. Bennett, ST Apr. 90, p1090-1101.
Reliability Model for Bridge Columns under Seismic Loads, Michel Ghosn and Ge Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p168-171.
Replacement of a Deteriorated Steel Sheet Pile Bulkhead, Vincent G. Miller and Vladimir Ostrov, (Ports '92, David Torseth, ed., 1992), p826-835.
Safeguarding Steel, Rita Robison, CE Apr. 92, p50-53.
Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p956-959. 1992), p956-959.

Schifflerized Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1920-1936.

condary Stresses in Closed Orthotropic Deck Ribs at Floor Beams, Roman Wolchuk and Alexis Ostapenko, ST Feb. 92, p582-595.

ST Feb. 92, p582-595.
Shear Connectors in Composite Beams with Longitudinally Cracked Slabs, Deric John Oehlers and Sung Moo Park, ST Aug. 92, p2004-202.
Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsam, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p215-225.
Slab Behavior in Composite Beams at Openings. I: Analysis, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p2287-2303.
Slab Behavior in Composite Beams at Openings. II: Tests. Slab Behavior in Composite Beams at Openings. II: Tests. Slab Behavior in Composite Beams at Openings. II: Tests.

p. p.2287-2303.
 Slab Behavior in Composite Beams at Openings. II: Tests and Verification, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p.2304-2322.
 Start-Ups, CE Nov. 92, p.10.
 Statistical Analysis of Slender Composite Beam-Column Strength, S. A. Mirza and B. W. Skrabek, ST May 92, p.1312-1332.

p1312-1332.
Strength of Composite Slabs, W. Samuel Easterling and Craig S. Young, ST Sept. 92, p2370-2389.
Structural Performance of Hardwood-Metal Composite Beams, Robert H. Kim and Jai B. Kim, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p718-731.
Structural Seismic Damper, Manuel Aguirre and A. Roberto Sánchez, ST May 92, p118-1171.
Supermarket Roof Collapse in Burnaby, British Columbia, Canada, C. Peter Jones and N. D. Nathan, CF Aug. 90, p142-160.
A Systems Reliability Approach to the Safety of Steel

A Systems Reliability Approach to the Safety of Steel Connections, Janice J. Trautner and Richard M. Bennett, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p495-498.

Time-Dependent Analysis of Composite Steel-Concrete Sections, R. Ian Gilbert, ST Nov. 89, p2687-2705. Turning on the Waterworks, Donald E. Eckmann, CE Aug. 92, p48-51.

Steel beams

Energy Dissipation in Determinate Steel Beams, Helen
M. Goldsworthy and Len K. Stevens, ST Jan. 92, pl-

Energy Dissipation in Indeterminate Steel Beams, Helen M. Goldsworthy and Len K. Stevens, ST Jan. 92, p18-33.

Steel Beams, S. Bild, G. Chen and N. S. Trahair, ST Aug. 92, p1987-2003.
 Risk Consistent Estimate of Heat-Straightening Applica-tions. II: Beams, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426.

Steel cables
Tying Back a Landslide, Stephen J. Klein, CE Dec. 92, p30-43.

Steel colum

Local and Interaction Buckling of Polygonal Section Steel Columns, Yasuhiro Migita, Tetsuhiko Aoki and Yuhshi Fukumoto, ST Oct. 92, p2659-2676.

Microbiologically Induced Corrosion, P. J. B. Scott and Michael Davies, CE May 92, p58-59.

Steel constructi

Anatomy of the Loma Prieta Earthquake Records of Two Steel Buildings Using MIMO System Identification, Y. Li and S. T. Mau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p689-692.

osy...

Steel fibers

Deformational Behavior of Fiber-Reinforced Concrete
Beams in Bending, H. V. Dwarakanath and T. S.
Nagaraj, ST Oct. 92, p2691-2698.

Fiber Pullout and Bond Slip. I: Analytical Study, Antoine
E. Naaman, George G. Namur, Jamil M. Alwan and
Husam S. Najm, ST Sept. 91, p2769-2790.

Flexural Analysis of Reinforced Concrete Beams Containing Steel Fibers, Byung Hwan Oh, ST Oct. 92,
p2821-2836.

p2821-2836. Fracture Toughness for Steel Fiber-Cement Paste Interfacial Zone, Mitsunori Kawamura and Shin-ichi Igarashi, MT Aug. 92, p227-239.

Normal- and High-Strength Fiber-Reinforced Concrete under Compression, A. Samer Ezeldin and Perumalsamy N. Balaguru, MT Nov. 92, p415-429.

Ohio Looks to Improve Bridge-Deck Performance, CE

Oct. 92, p11.

Oct. 92, p11.
Properties of Aramid-Fiber Reinforced Concrete and SIF-CON, Antonio Nanni, MT Feb. 92, p1-15.
Seismic Behavior and Shear Strength of Framed Joint Using Steel-Fiber Reinforced Concrete, Jiuru Tang, Chaobin Hu, Kaijian Yang and Yongcheng Yan, ST Feb. 92, p341-338.

teel frames

Column Design in Steel Frames under Gravity Loads, Oscar de Buen, ST Oct. 92, p.2928-2935. Cyclic Behavior of End-Plate Moment Connections, Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p.2917-2930.

p.2917-2930.

Damage Diagnosis of Steel Frames Using Vibrational Signature Analysis, G. C. Yao, K. C. Chang and G. C. Lee, EM Sept. 92, p1949-1961.

Second-Order Inelastic Analysis Methods for Steel-Frame Design, W. S. King, D. W. White and W. F. Chen, Teb. 92, p408-428.

Seismic Panel Zone Design Effect on Elastic Story Drift in Steel Frames, Keh-Chyuan Tsai and Egor P. Popov, ST Dec. 90, p3285-3301.

Seismic Performance of Fixed-Base and Base-Isolated Steel Frames, A. N. Lin and H. W. Shenton, III., EM May 92, p921-941.

May 92, p921-941.
Stability of Beams in Eccentrically Braced Frames, M. D. Engelhardt, K. C. Tsai and E. P. Popov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1043-1046.

Tomorrow's Schools, Socrates Ioannides and Robert P. Beall, CE Jan. 92, p56-58.

Steel piles

Museum Floored on its Piles, CE Apr. 92, p85.

Offshore Challenge, Gordon H. Moore and Juan J.

Campo, CE Oct. 92, p48-51.

Steel pipe piles
Review of API Guidelines for Pipe Piles in Sand, Magued
Iskander and R. E. Olson, (Civil Engineering in the
Oceans V, Robert T. Hudspeth, ed., 1992), p798-812.
Yes and Rohalitation of Seattle's Pier 69, David Pierce
and Ronald E. Martinson, (Ports '92, David Torseth,
ed., 1992), p418-428.

Steel pipes

Homopolar Pulse Butt Welding of API 51. Line Pipe, Paul W. Haase, Zwy Eliezer, Robert Carnes, John Gully and Mike Harville, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p813-827.

Strength and Behavior of Stender Steel Pipe under Pre-stressing Force, Zenon A. Zielinski and Hamid Mobasher-Fard, ST Oct. 92, p2911-2926.

Transportation of Demineralized Water: Case Study, Ali A. Quraishi and Muhammad S. Al-Amry, TE July/Aug. 92, p576-585.

Steel plates

Elastic Buckling of Incomplete Composite Plates, Koichi
Sato, EM Jan. 92, pl-19.

Premature Failure of Externally Plated Reinforced Concrete Beams, Deric John Oehlers and John Paul Moran, ST Apr. 90, p978-995.

Reinforced Concrete Beams with Plates Glued to Their Soffits, Deric John Oehlers, ST Aug. 92, p2023-2038. Risk Consistent Estimate of Heat-Straightening Applica-tions. I: Plates, Luis A. de Béjar, Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409.

Rockfill Dams: Steel-Faced Dam (Paper introduced by J. Barry Cooke), James L. Sherard, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p1-9.

Compendium of Design Office Problems, Committee on Design of Steel Building Structures of the Committee on Metals, Structural Division, ST Dec. 92, p3444-

3463.

Design of Latticed Steel Transmission Structures (ANSI/ASCE 10-90) (St No. 90-010), Standards Committee for Design of Steel Transmission Towers, American Society of Civil Engineers, (Edwin H. Gaylord, chmn.), 1992, 0-87262-858-2, 64pp.

Fatigue Life of Offshore Steel Structures Under Stochastic Loading, Henning Agerskov and Niels Thoughrd Pedersen, ST Aug. 92, p2101-2117.

Fatigue of Welded Cruciforms Subjected to Narrow-Band Loadings, S. Sarkani, D. P. Kihl and J. E. Beach, EM Feb. 92, p236-311.

Inelastic Amplification Factor for Design of Steel Beam.

Inelastic Amplification Factor for Design of Steel Beam-Columns, I. S. Sohal and N. A. Syed, ST July 92, Columns, I. p1822-1839

Locally Buckled Plastic Hinge Behavior Under Monoto

Locally Buckled Plastic Hinge Behavior Under Monotonic and Cyclic Loading Condition, Eun-Taik Lee and G. C. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.
Neural Network Based Classifiers in Vibrational Signature Analysis, M. F. Elkordy, K. C. Chang and G. C. Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073.
Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-1412.

Weldment Design for RHS Truss Connections. I: Appli-cations, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2784-2803.

Weldment Design for RHS Truss Connections. II: Experimentation, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2804-2820.

Dynamic Stability of Composite-Material Circular Cylin-drical Shells with Orthogonal Stiffeners, C. W. Bert, C. D. Kim and V. Birman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992). p652-655.

Stiffened Sheathings of Orthotropic Cylindrical Shells, P. Rigo, ST Apr. 92, p926-943.

Structural Efficiency of Internally Ring-Stiffened Steel Tubular Joints, D. S. Ramachandra Murthy, A. G. Madhava Rao, P. Gandhi and P. K. Pant, ST Nov. 92, p3016-3035.

Wave Propagation in Fluid Loaded Periodic Structures, Michael L. Accorsi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p212-215.

Stiffeni

Design Codes for Lunar Structures, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl-12.

Simultaneous Design and Control of Stiffened Laminated Composite Structures, Luis Mesquita and Manohar P. Kamat, AS Jan. 92, p111-126.

Approximating Lateral Stiffness of Stories in Elastic Frames, Arturo E. Schultz, ST Jan. 92, p243-263.

Axial and Free-Bending Analysis of Spiral Strands Made Simple, Mohammed Raoof and Yu Ping Huang, EM Dec. 92, p2335-2351.

Condition Monitoring of Structures Using Transient Response, George Hearn, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p127-138.

Cone Models for a Pile Foundation, John P. Wolf, Jethro W. Meek and Chongmin Song, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p94-113.

Cone Models for Homogeneous Soil. 1, Jethro W. Meek and John P. Wolf, GT May 92, p667-685.

anu John F. Woll, O'I May 92, pool-985.
Cone Models for Soil Layer on Rigid Rock. II, Jethro W. Meek and John P. Wolf, GT May 92, p686-703.
Design Cable-stayed Bridge for Cost Effectiveness and Safety, Jih-Jiang Chyu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p59-62.

Dynamic Stiffness Analysis of Concrete Pavement Slabs, N. McCavitt, M. R. Yates and M. C. Forde, TE July/ Aug. 92, p540-556.

The Effective Stress Path for Soil at High Pressure, Jerry A. Yamamuro and Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p729-732.

Elastic Analysis of Submarine Pipelines, Poon-Hwei Chuang and David Lloyd Smith, ST Jan. 92, p90-107. Estimation of Subgrade Resilient Modulus from Standard Tests, E. C. Drumm, Y. Boateng-Poku and T. Johnson Pierce, GT May 90, p774-789.

Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, J. Larralde, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654.

Flexible Plates for Control of Stress Distribution, Nenad Gucunski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p592-595.

Hygrothermal Effects on Mechanical Properties of Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Feb. 92, p567-581.

Soilis, 51 Peo. 32, p. 501-501.
Impact of Variability in Pavement Parameters on Backcalculated Moduli, Jessica Rodriguez-Gomez, Carlos Ferregut and Sobeti Nazarian, (Road and Air-parametal Restonse Monitoring Systems, Vincent port Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p261-

The Initiation of Bifurcations and Localization in Dam-aging Materials, M. K. Neilsen and H. L. Schreyer, (En-gineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p365-368.

Inverse Problems in Biomechanics, Utpal Roy and Gau-tam Ray, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p980-983.

Modeling the Stiffness of Pile Group Foundations, Toorak Zokaie and Karl M. Romstad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p810-817.

Moduli and Damping Factors of Soft Marine Clays, Takaaki Kagawa, GT Sept. 92, p1360-1375.

Neural Networks Based Damage Detection in Structures, Zbigniew P. Szewczyk and Prabhat Hajela, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1163-1170.

New Stability Equation for Columns in Braced Frames, Raúl Goncalves S., ST July 92, p1853-1870.

Nondestructive and Destructive Testing of a Three Span Skewed R. C. Slab Bridge, R. A. Miller, A. E. Aktan and B. M. Shahrooz, (Nondestructive Testing of Con-crete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p150-161.

Stein Sture, ed., 1992), p150-161.

Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, Loai El-Gazairly, Barry Goodno and James Craig, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p896-904.

Optimal Configuration for Fiber Reinforced Composites under Uncertainties of Material Properties and Loadings, Yoshisada Murotsu, Mitsunori Miki and Shaowen Shao, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p547-550.

Pipe Soil Stiffness Ratio Effect on Flexible Pipe Buckling Threshold, Kenneth K. Kienow and Robert C. Prevost, TE Mar./Apr. 89, p112-129.

Prying and Shear in End-Plate Connection Design, Cameron P. Chasten, Le-Wu Lu and George C. Driscoll, ST May 92, p1295-1311.

Reliability Analysis of Degrading Elasto-Plastic Oscilla-tors, Igor Rychlik and Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p304-307.

N. Lin, ed., 1992, p.304-307.
 Reliability of Degrading Dynamic Systems with Applications, Mircea Grigoriu and Igor Rychik, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.300-303.
 Seismic Response of Multianchored Retaining Walls, Thomas J. Siller and Dorothy D. Frawley, GT Nov. 92, p.1787-198.

p1787-1803.

p1787-18US.
Stability of Built-up Columns, Atle Gjelsvik, EM June 91, p1331-1345.
Stiffness Coefficients of Layered Soil Systems, A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624.
Stiffness Expressions for Element with Central and End Springs, R. E. McConnel and A. I. El-Sheikh, ST Apr. 92, p955-969.

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p328-331.

Tensile-Integrity Structural Concepts for the Lunar Surface, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

p276-283

p2/16-283.

Torsional Stiffness of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, p1168-1185.

Transition Plate-Bending Elements for Compatible Mesh Gradation, Chang-Koon Choi and Yong-Myung Park, EM Mar. 92, p462-480.

Lon Mar. 74, pa02.4-80. Unidirected Twined-Strand Composites and Their Uses, Charies E. Kaempen, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p546-559. Wheel Load Distribution in 1-Girder Highway Bridges, Kassim M. Tarthini and Gerald R. Frederick, ST May 92, p1285-1294.

Stiffness matrix
3D Inelastic Dynamic Analysis of RC Structures, Roy F.
Lobo, Sashi K. Kunnath and Andrei M. Reinhorn,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p905-912.
Event-to-Event Strategy for Nonlinear Analysis of Truss
Structures. J. A. Karamchandani and C. A. Cornell, ST
Apr. 92, p895-909.

Fact. Formulation, of Asymmetric-Interface-Element

Exact Formulation of Axisymmetric-Interface-Element Stiffness Matrix, Zehong Yuan and Koon Meng Chua, GT Aug. 92, p1264-1271.

Nonlinear Analysis of Steel Space Structures, Ram Chandra, D. N. Trikha and Prem Krishna, ST Apr. 90, p898-909.

poro-909.
Parallelization of Linear Finite Element Analysis, Gwolong Lai and Hsin-Chu Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p655-662.

Plates on Elastic Foundation, David S. Chilton and Jerzy W. Wekezer, ST Nov. 90, p3236-3241.

Response Variability and Reliability of Plates Using the Weighted Integral Method, Friedrich J. Wall and George Deodatis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p41-44.

Stiffness Matrix for Nonlinear Analysis of Thin-Walled Frames, Aura Conci, EM Sept. 92, p1859-1875.

Thin-Walled Multicell Box-Girder Finite Element, A. Ghani Razaqpur and Hangang Li, ST Oct. 91, p2953-2971.

Timoshenko Beam Element Resting on Two-Parameter Elastic Foundation, L. M. Shirima and M. W. Giger, EM Feb. 92, p280-295.

Stiffness methods
An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, Y. Wang and R. K. N. D. Rajapakse,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p1008-1011.

M. Niedzwecki, ed., 1992), p1008-1011.
Stilling basins
Fluctuating Uplift and Lining Design in Spillway Stilling Basins, Virgilio Fiorotto and Andrea Rinaldo, HY Apr. 92, p578-596.
Force on Slab Beneath Hydraulic Jump, Javad Farhoudi and Rangaswami Narayanan, HY Jan. 91, p64-82.
Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersaturation, Perry L. Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), n311-316. p311-316.

Pipe Plunge Pool Energy Dissipator, Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323.

and Clayton L. Anderson, HY Mar. 91, p303-323.

Stochastic models

Accounting for Uncertainty in Natural Systems, Milton E. Harr, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1612-1616.

Conceptual Basis of Seasonal Streamflow Time Series Models, Jose D. Salas and J. T. B. Obeysekera, HY Aug. 92, p1186-1194.

Critical Buckling Load Statistics of an Uncertain Column, Garrett D. Jeong, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p563-566.

A Demand Driven Decision Support System for Opera-

1992), pos-3-900.
A Demand Driven Decision Support System for Operation of Reservoirs, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p561-566.

Deterministic Geologic Processes and Stochastic Modeling, Christopher A. Rautman and Alan L. Flint, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

dioactive Waste Management Program Committee, 1992), p1617-1624.

Effect of Drought on Urban Water Supplies. I: Drought Analysis, David M. Frick, Dennis Bode and Jose D. Salas, HY June 90, p733-753.

Low-Cycle Fatigue Prediction for Rambers-Osgood Type Materials, Faissal H. Al-Sugair, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p432-435.

Mechanics of Saltating Grains. II, Masato Sekine and Hideo Kikkawa, HY Apr. 92, p536-558.

Performance Evaluation of Lake Shelbyville by Stochastic Dynamic Programming, Han-Lin Lee, Jon C. Liebman and E. Downey Brill, Jr., WR Mar./Apr. 92, p185-204. man and p185-204.

p185-204.
Simulation-Based Excursion Statistics, Gordon A. Fenton and Erik H. Vanmarcke, EM June 92, p1129-1145.
A Stochastic Model for Crack Initiation and Fatigue Life, Michael R. Emptage and Bevil J. Shaw, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p308-311.
Stochastic Model for Pavement Design, K. H. Chua, Der Kiureghian and C. L. Monismith, TE Nov./Dec. 92, p769-786.
Stochastic Model for, Soil Moisture Deficit in Irrigated.

p769-786.
 Stochastie Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/ Aug. 92, p527-542.
 Stochastie Modeling of Fatigue Crack Growth with Retar-dation, Dhirendra Verma, Dario A. Gasparini and Fred Moses, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p433-436.

Stochastic Modeling of Short Fiber Reinforced Composites—A Review, Jamshid Mohammadi and Artur S. Kurzydlo, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p479-

Stochastic Modelling of Strong Ground Motions for the Istanbul, Turkey Area from Seismic Data for the Sur-rounding Region, Kirsten L. Findell and Ahmet S. Çakmak, (Probabilistic Mechanics and Sructural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-

Stochastic Simulation and Optimization of Irrigation Canal Network Flows, Timothy K. Gates, Abdel-mohsen A. Alshaikh and Samir I. Ahmed, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p474-480.

Stochastic Simulation of Climate Input for Water Supply Forecasting, Roy W. Koch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p557-562

A Stochastic Water Quality Model for Urban Watersheds, D. E. Barbé, J. F. Cruise and X. Mo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p791-796.

Structural Control Under Stochastic Seismic Loads, J. N. Yang, Z. Li and S. Vongchavalitkul, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p828-831.

Void Ratio of Noncohesive Soils and Similar Materials, B. Aberg, GT Sept. 92, p1315-1334.

# Stochastic proces

Adaptive Parameter Estimation for Multisite Hydrologic Forecasting, Haitham M. Awwad and Juan B. Valdes, HY Sept. 92, p1201-1221.

Analytical Methods for the Determination of Correla-tions and Spectra of Nonlinear System Response, R-Valery Roy and Pol D. Spanos, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p412-415.

Application of a Dolos Structural Design Procedure, Jeffrey A. Melby, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p830-846.

Conditional and Joint Failure Surface Crossing of Sto-chastic Processes, Øistein Hagen, EM Sept. 92, p1814-

Digital Simulation of Wind Load Effects, Ahsan Kareem and Yousun Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p284-287.

Earthquake Ground Motion Modeling with Stochastic Line Source, Ruichong Zhang and Y. K. Lin, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p256-259.

Evaluation of Seismic Soil Response Using Stochastic Linearization, Jeen-Shang Lin, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p356-359.

Fatigue Life of Offshore Steel Structures Under Stochas-tic Loading, Henning Agerskov and Niels Thougard Pedersen, ST Aug. 92, p2101-2117.

Fatigue Strength of Welded Joints Under Broadband Loadings, David P. Kihl, Shahram Sarkani and James A. Kuny, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p428-

Finite Element Dynamic Reliability Analysis with Con-densation, Sankaran Mahadevan and Sandeep Mehta, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p332-335.

In-Plane Non-Linear Random Vibration of Composite Plates, Ronald S. Harichandran and Ahmad Hawwari, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p188-191.

Nonstationary Response of Structures with Closely Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.

On a Micromechanical Basis of Stochastic Constitutive Laws, Martin Ostoja-Starzewski, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

Probabilistic Characteristics of a Sliding Structure Via New Stochastic Linearization Methods, Ruichong Zhang, Isaac Elishakoff and Masanobu Shinozuka, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p196-199 Probabilistic Description of Buffeting Response of Long-Span Bridges, Friedrich J. Wall and Christian G. Buche et, EM Dec. 92, p2401-2420.

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441.

Pseudo-Simulation Method for Stochastic Problems, B. A. Zeldin and P. D. Spanos, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p37-40.

Random Vibration of the Viscoelastic Structure under Series of Stochastic Excitations, Pawel Sniady and Stanislaw Zukowski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Reliability Analysis of Creep and Shrinkage Effects, C. Q. Li and R. E. Melchers, ST Sept. 92, p2323-2337.

Reliability of Geometrically Nonlinear PR Frames, Achintya Haldar and Yiguang Zhou, EM Oct. 92, p2148-2155.

Reliability-Based Optimization Using Sequential Quadratic Programming, Sankaran Mahadevan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p543-546.

Response of Suspension and Deck Arch Bridges to Spa-tially Varying Ground Motion, Ronald S. Harichan-dran, Ahmad Hawwari and Basheer N. Sweidan, (Prob-abilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p264-267.

Response Variability and Reliability of Plates Using the Weighted Integral Method, Friedrich J. Wall and George Deodatis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p41-44.

Response Variability of Structures Subjected to Bifurca-tion Buckling, G. V. Palassopoulos, EM June 92, p1164-1183.

Responses of Nonlinear Oscillators Excited by Non-Gaussian Pulse Processes, Sau-Lon James Hu, (Proba-bilistic Mechanics and Structural and Geotechnical Re-

olissic Mechanics and Structural and opotecrinical re-liability, Y. K. Lin, ed., 1992), p144-147. Seismic Response Variability of Soil Sites, C. H. Yeh and M. S. Rahman, (Probabilistic Mechanics and Structural and Geote p392-395.

Slepian Process of a Non-stationary Process, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p296-

Stepwise Disaggregation Scheme for Synthetic Hydrology, Emidio G. Santos and Jose D. Salas, HY May 92, p765-784.

Stochastic Analysis of Seasonal Hydraulic Conductivity, Ram Gupta, Ramesh Rudra, Trevor Dickinson, Naveen Patni and Greg Wall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p32-38.

A Stochastic Approach to the Fatigue Reliability, Yuan Jie Lua, Wing Kam Liu and Ted Belytschko, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p324-327.

Stochastic Critical Excitations, Mukund Srinivasan, Ross Corotis and Bruce Ellingwood, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391.

Stochastic Dynamics of Hysteretic Systems, Lucia Faravelli and Paolo Venini, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p53-56.

ed., 1992), p3:-50.
Stochastic FEM Based on Local Averages of Random Vector Fields, W. Q. Zhu, Y. J. Ren and W. Q. Wu, EM Mar. 92, p496-511.
Stochastic Finite & Boundary Element Simulations, Gautam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123.

Stochastic Finite and Boundary Elements, Gautam Dasg-upta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p932-935.

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Yoshikawa, Shigeru Nakagiri and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Stochastic Finite Elements and Reliability Analysis, Lu-cia Faravelli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Stochastic Response of a Caster-Mounted System, Mi-chael A. Moser and Wilfred D. Iwan, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p316-319

Stochastic Theory for Irregular Stream Modeling. Part I: Flow Resistance, Shu-Guang Li, Lakshmi Venkatara-man and Dennis McLaughlin, HY Aug. 92, p1079-

Surface Motion Due to Stochastic Plane Sources in a Layered Medium, Y. Yong and J. Yu. (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p184-187.

Variability Response Functions and Stochastic Field Dis-cretization in Stochastic Finite Element Methods, Tsuyoshi Takada, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p116-119.

Vibration Control of Highway Bridge Under Earth-quakes, Zhikun Hou and Gongkang Fu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p176-179.

Evacuation Modeling Near a Chemical Stockpile Site, Donald E. Newsom, Marc A. Madore and Robert T. Jaske, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p180-184.

Effect of Nitrogen on Yield Using Bioenergetics Theory, R. L. Droste, EE Sept./Oct. 92, p814-820.

Oxidation of Bromide by Hypochlorous Acid in Aqueous Solutions: Stoichiometry and Kinetics, N. Phillip and V. Diyamandoglu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawe

Design of Floating Stone Columns in Hydraulic Fill, Ray-mond A. DeStephen, David W. Kozera and Frank J. Swekosky, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p829-841.

A Monumental Task, Victor Omelchenko, Thad Bergling, David J. Oleynik and Satish B. Shah, CE June 92, p60-

Application of SMA Technology in Georgia, Robert Ronald Collins and Steve Fernando Valdez, (Materials. Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl 60-171.

The Assessment of Armourstone for Shoreline Protection, R. Koopmans and R. B. Watts, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992, p82-94.

Durability of Armor Stone for Rubble Mound Structures, Orville T. Magoon and W. F. Baird, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p3-4.

Realistic Specifications for Manufactured Sand, Charles R. Marek, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p245-260.

Slide Stabilization with Stone-Fill Trenches, George L. Sills and Robert L. Fleming, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1382-1394.

U.S. Experience With Armor-Stone Quality and Performance, Richard J. Lutton, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p40-59.

Storage and Diversion in Planning Subsurface Facilities for the Con-version in Planning Subsurface Facilities for the Con-trol of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.

Studge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Ba-log, Manu A. Patel and Turgay M. Ertugrul, [Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p303-308.

Storm-Water Detention Storage Design under Random Pollutant Loading, Rafael Segarra-García and Vasude-van G. Loganathan, WR Sept./Oct. 92, p475-491.

Type Curves for a Slug Test in an Infinitely or Semi-infinitely Thick Aquifer, Gary R. Chirlin, (Symposium on Ground Water, Gerard P. Lennon, ed. and Shakrokh Rouhani, ed., 1991), p169-174.

Design Optimization of Passively Cooled Room, Sydney C. K. Chu and Piyawat Boon-Long, EY Apr. 92, p18-

Gate Maritime Wharf and Intermodal Facility, Viswanath K. Kumar, William L. Allen and Thomas A. Mantia, (Ports '92, David Torseth, ed., 1992), p43-57.

Computer Modeling of Forced Mixing in Waste Storage Tanks, L. L. Eyler and T. E. Michener, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Dynamic Response of Flexibly Supported Liquid-Storage Tanks, Anestis S. Veletsos, Yu Tang and H. T. Tang, ST Jan. 92, p264-283.

Experimental Characterization of Jet Forces on Waste Tank Components, Judith Ann Bamberger, James M. Bates and E. Dale Waters, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p628-635.

Manaugement rogram Committee, 1992), p628-635.
Hanford Defense Waste Separation Options, B. A. Wolfe,
W. B. Barton and D. G. Sutherland, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p1701-1710.

Houston Intercontinental Airport Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

New Tanks Stop Leaks at Army Base, CE Oct. 92, p88.

Physical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SY-101, Rudolph T. Allemann, High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-gram Committee, 1992), p610-614.

gram Committee, 1992), po10-014.
Settlement, Structural Failure, and In-place Repair of Above Ground Storage Tanks, Richard M. Berry and Robert P. Buhrow, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p240-251.
Soil Contamination Issues at Port Marine Terminals, Donald W. Rice, (Ports '92, David Torseth, ed., 1992), p288-300.

A Chance Constrained Optimization Model Using Kinematic Wave Routing for Stormwater Infrastructure Rehabilitation, Timothy L. Jacobs and Miguel A. Medina, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p748-753.

Design Discharge for Urban Stormwater Drainage, A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p713-718.

Municipal Field Screening Analyses, Gene N. Rattan and John L. McDaniel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p50-

OUTFL—A Spreadsheet for Design of Adequate Storm Drainage Outfalls, Oner Yucel and Edward L. Lowman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p707-712. Sizing Stormwater Detention Reservoirs to Reduce Peak Flows, Bruce M. McEnroe, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p719-724.

Trash Rack Blockage in Supercritical Flow, Steven R. Abt, Thomas E. Brisbane, David M. Frick and Charles A. McKnight, HY Dec. 92, p1692-1696.

Storm runoff

A Dual Level Methodology for Stormwater Detention
Basin Design, Donald V. Chase and Lindell E.
Ormsbee, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p849-854.
Initic Element Modeling of Storm Water Runoff Using
GRASS GIS, Baxter E. Vieux and James Westervelt,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p712-718.
Landfill Storm Water Runoff Control, Paul Makowski
and Daniel Pazdersky, (Environmental Engineering:

Landfull Storm Water Runoff Control, Paul Makowski and Daniel Pazdersky, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p423-428. Ongoing Monitoring Results Pilot Stormwater Disposal Facilities, Pierce County, Washington, Molly Adolfson and Dan Clark, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p510-515.

Simplified Design of Multi-Stage Outfalls for Urban De-tention Basins, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p861-866.

Storm Runoff Detention for Pollutant Removal, A. Osman Akan, EE May/June 92, p380-389.

Storm sewers

Drop Manholes in Supercritical Pipelines, George C.
Christodoulou, IR Jan./Feb. 91, p37-47.

Head Losses in Storm Sewer Manholes: Submerged Jet Theory, Flemming Bo Pedersen and Ole Mark, HY Nov. 90, p1317-1328. The MIDUSS Touch, Ed Chamberland, CC June 92,

p1,10-14.

p1, 10-14.
North Central Texas Municipalities Address the NPDES Stormwater Regulations Through Regional Coordination, George E. Oswald, Alan H. Plummer and Robert W. Brashear, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p62-63.

NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, Paul Makowski and John G. Garland, III., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p797-

D Open-Channel Flow Simulation Using TVD-McCormack Scheme, P. García-Navarro, F. Alcrudo and J. M. Savirón, HY Oct. 92, p1359-1372.

and J. M. Savirón, HY Oct. 92, p1359-1372.
Estimation of Wind Fields for Coastal Modeling, Edward F. Thompson and Zeki Demirbilek, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Betiford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p564-573.
Floods in Bangladesh, Baum K. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-976.

The Landfall of Hurricane Hugo, Billy L. Edge, Ben L. Sill and Orville T. Magoon, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p.988-993.

A Numerical Simulation Approach to Estimating Disposal Site Stability, Norman W. Scheffner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1006-1011.

Tide and Hurricane Storm Surge Computations for the Western North Atlantic and Gulf of Mexico, Joannes J. Westerink, Julia C. Muccino and Richard A. Luettich, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, p538-550.
Tide and Storm Surge Predictions Using Finite Element Model, J. J. Westerink, R. A. Luettich, A. M. Baptista, N. W. Scheffner and P. Farrar, HY Oct. 92, p1373-1300.

1390.

Adaptation of Horton and SCS Infiltration Equations to Complex Storms, Gert Aron, IR Mar./Apr. 92, p275-284.

Considerations in Using Bragg Reflection for Storm Ero-sion Protection, James A. Bailard, Jack W. DeVries and James T. Kirby, WW Jan./Feb. 92, p62-74.

and James T. Kirby, WW Jan./Feb. 92, pb2-74. Empirical Simulation of Future Hurricane Storm Histo-ries as a Tool in Engineering and Economic Analysis, Leon Borgman, Martin Miller, Lee Butler and Robin Reinhard, (Crvil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p42-65. Sensitivity of HMR-S1/52/PMP-Based Probable Maxi-mum Flood (PMF) to Basin Lag and Land Use, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p895-899.

Using Simple Models to Evaluate Complex Storm Effects, Paul L. Freedman and John K. Marr, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-89.

Stornwater
A Chance Constrained Optimization Model Using Kinematic Wave Routing for Stormwater Infrastructure Rehabilitation, Timothy L. Jacobs and Miguel A. Medina, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p748-753.
Design Discharge for Urban Stormwater Drainage, A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p713-718.
Hydrologic Methods for Mitigating and Remediating

Hings, et. and Ivan U. Bhownin, et., 1972, p. 713-718. Hydrologic Methods for Mitigating and Remediating Wetlands in Industrial Development, W. J. Rabe, Jr. and J. K. Virmani, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p488-402.

Land Use and Imperviousness Information Acquisition, Ming T. Lee, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhownik, ed., 1992), p363-368.

Liberty Reservoir Stormwater Retrofit Project, George G. Balog, William P. Stack, Kenneth T. Belt and Prakash Mistry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p346-351.

Linaweaver, ed., 1992, p. 396-351.
North Central Texas Municipalities Address the NPDES Stormwater Regulations Through Regional Coordination, George E. Oswald, Alan H. Plummer and Robert W. Brashear, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marnhall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p62-63.

Oakland Braces for Storm Overflows, CE Nov. 92, p23. Ongoing Monitoring Results Pilot Stormwater Disposal Facilities, Pierce County, Washington, Molly Adolfson and Dan Clark, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p510-

513.
Planning, Assessing and Implementing Pipeline Rehabilitation Options, B. Jay Schrock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741.
Preliminary Sizing of Detention Reservoirs to Reduce Peak Discharges, Bruce M. McEnroe, HY Nov. 92,

p1540-1549.

Recovery of Metals from Water Using Ion Exchange, Thomas A. Hickey and David K. Stevens, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515.

Retrofitting Storm Water Facilities for Quantity and Quality Control, Stuart G. Walesh, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p786-791.

Topographic Effects on Stormflow Acidity, David Wolock, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p878-883.

ed. and Nami O. Bnowmik, ed., 1992), p8 /8-883.
USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, R. Brad Jennings, Tim H. Raines and Lucia G. Colangione, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p56-61.

Using Simple Models to Evaluate Complex Storm Effects, Paul L. Freedman and John K. Marr, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-89.

Water Quality Management Planning—Bird River Wa-tershed, Alan Cavacas, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101.

Stormwater management
Accumulation Effects of Stormwater Management Detention Basins, Robert G. Traver and Ronald A. Chadderton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p925-930.

Activities of the North Central Texas Council of Governments in Urban Storm Water Planning, John Promise and Samuel W. Brush, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p43-49.

ADICPR Version 1.40, Bernard Golding, CC Jan. 92, p1.4-6.

Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G. Balog, William P. Stack, Kenneth T. Belt and Nathan J. Beil, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503.

ed., 1992), paye-303.

Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, Raymond M. Wright, Igor Runge, Rajat Roy Chaudhury and Daniel W. Urish, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p462-467.

CSO Abatement for Gloucester Harbor in Massachusetts, Jon R. Pearson, Donald J. Chelton and Michael P. Col-lins, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1240-1241.

and Nami G. Browmis, ed., 1992, p. 1240-1241.

Design Storms for Emergency Spillways of SWM Ponds,
Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p934-939.

Device Could Bypass Bed Load, Trap Pollutants, CE Aug.
92, p15.

Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, Hans J. Peterson and William R. Grout, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p516-522.

A Dual Level Methodology for Stormwater Detention Basin Design, Donald V. Chase and Lindell E. Ormsbee, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), 849-854.

Efficient Sizing of Storm Water Treatment Ponds, Thomas R. Sear and Brenda van Ravenswaay, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

Raamouk, ed., 1772.), p. 780-785.
FAA Storm Water Program, W. H. Espey, Jr., Raymond Rose and George I. Legarreta, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p940-945.

Finite Element Modeling of Storm Water Runoff Using GRASS GIS, Baxter E. Vieux and James Westervelt, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p712-718.

Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.

Hydrology, Hydraulics and CAD, Peter J.R. Buttner, CC Dec. 92, p1,7-10.

Hydrology, Hydraulics and CAD, Peter J.R. Buttner, CC Dec. 92, p1,7-10.

Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area, Jill C. Bicknell and Sachiko Itagaki, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p451-456.

Jefferson Parish Storm Water Management, Marnie Winter and Kent Dussom, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p457-461.

Landfill Storm Water Runoff Control, Paul Makowski and Daniel Pazdersky, (Environmental Engineering: Saving a Threatened Resource-In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p423-428.

Modeling Stormwater Basin Effects, Robert G. Traver and Ronald A. Chadderton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p855-860.

Pollution Control Under the NPDES Stormwater Program, Thomas S. George and June Barrett-McDaniels, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645.

Preliminary Sizing of Detention Reservoirs to Reduce Peak Discharges, Bruce M. McEnroe, HY Nov. 92, p1540-1549.

Regional Planning for Stormwater Management, Thomas S. George and John P. Hartisan (Environmental Engineering: Sogong and John P. Hartisan (Environmental Engineering)

Regional Planning for Stormwater Management, Thomas S. Goorge and John P. Hartigan, (Environmental Engi-neering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, p492-497. San Francisco Plans Wastewater Storage Tunnel, CE Oct.

San Francisco 92, p22,24.

92, p22,24.

Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silverston and Mark Easley, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361.

Sensitivity of Non-Point Source Pollution Controls to Land Use, Oner Yucel and David W. Blaha, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p358-363.

Simplified Design of Multi-Stage Outfalls for Urban Detention Basins, Hormoz Pazwash, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p861-866.

Sizing Stormwater Detention Reservoirs to Reduce Peak

Aaramouz, cu., 1992), p801-866.
Sizing Stormwater Detention Reservoirs to Reduce Peak
Flows, Bruce M. McEnroe, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p719-724.

Storm Runoff Detention for Pollutant Removal, A. Osman Akan, EE May/June 92, p380-389.

A Storm Water Utility Case Study, Salt Lake City, Utah, Charles H. Call, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992).

Storm-Water Detention Storage Design under Random Pollutant Loading, Rafael Segarra-García and Vasudevan G. Loganathan, WR Sept./Oct. 92, p475-491.

Storm-Water Permits: Trickle Becomes Torrent, Jeffrey Beard, CE Nov. 92, p112.

Deard, LE NOV. 92, p.112.

Task Committee Report on Urban Hydrology Chapter,
David F. Kibler, A. Osman Akan, Christopher B.
Burke, Mark W. Glidden, Gert Aron, Richard H.
McCuen and Andrew J. Reese, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p.725-728.

Vater Program Upgrade Set for Down Under, CE Apr. 92, p21.

The Analysis Related to the Impact of Composite Panels, Ronald Perry, Anthony Palazotto and Raghbor San-dhu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 286-1296.

Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Concrete Box Sections Under Biaxial Bending and Axial Load, Cengiz Dundar, ST Mar. 90, p860-865.

Constitutive Behavior of Stress-Induced Anisotropic Cohesive Soil, Jeff S. Budiman, Stein Sture and Hon-Yim Ko, GT Sept. 92, p1348-1359.

Cracking Response of RC Members Subjected to Uniaxi-al Tension, Gaetano Russo and Filippo Romano, ST May 92, p1172-1190.

May 24, p11-190.
Creep Recovery of Prepacked Aggregate Concrete, Abu S. M. Abdul Awal, MT Aug. 92, p320-325.
Damage of Concrete in Fatigue, A. Alliche and D. François, EM Nov. 92, p2176-2190.
Debonding of a Inhomogeneity from a Plastic Matrix, Alan J. Levy, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p252-255.

ed. and John M. Niedzwecki, ed., 1992), p.252-255.
Design Considerations for Multi-Wheel Aircraft, Walter R. Barker and Carlos R. Gonzalez, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p.463.
Differential Motions in Sedimentary Valleys, Apostolos S. Papageorgiou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.400-403.

Direct Analysis of Prestressed Concrete Members, A. S. Prasada Rao, ST Dec. 90, p3432-3447.

Estimating Damage and its Influence on Fracture Tough-ness, J. F. Labuz, L. Biolzi and C. N. Chen, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p523-526.

Evaluation of Flowable Fly-Ash Backfill. I: Static Load-ing, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463.

Evaluation of Flowable Fly-Ash Backfill. II: Dynamic Loading, Richard D. Peindl, Rajaram Janardhanam and Frank Burns, GT Mar. 92, p464-474.

and Frank Burns, G1 Mar. 92, p464-474.

Mona E. McAlarney, Letty Moss-Salentijn, Melvin L. Moss and Manjit Basra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p960-963.

Form Comparison Without Anatomical Landmarks, Gautam Dasgupta, Mona E. McAlarney, Colin Goo-dall, Letty Moss-Salentijn and Melvin L. Moss, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975.

High-Temperature Properties of Fire-Resistant Steel for Buildings, Y. Sakumoto, T. Yamaguchi, M. Ohashi and H. Saito, ST Feb. 92, p392-407.

In-aitu Stress and Strain Measurements in Dynamically Loaded Asphalt Pavement Structures, C. H. Vogelzang and S. R. Bouman, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p.244-260.

Robert A. Eaton, ed., 1992, p.244-260.

Reasuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, David W. Jensen and John M. Cory, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1273-1285.

Mechanics of Growing Deformable Solids: A Review, V. E. Naumov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p510-513.

ed. and Jonn M. Niedzwecki, ed., 1992), p510-513. Moduli and Damping Factors of Soft Marine Clays, Takaaki Kagawa, GT Sept. 92, p1360-1375. Prevention of Stress Relaxation in Viscoelastic Struc-tures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

Relationships Between Error Estimation and Adaptive Computations in Strain Localization, D. Aubry and B. Tie, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283.

John M. Niculawaka, co., 1976, paperson.
Strain and Stress Measurements in Pavements, Matti
Huhtala and Jari Pihlajamäki, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo,
ed. and Robert A. Eaton, ed., 1992), p229-243.

Strain-Based Damage Deactivation in Concrete, N. R. Hansen and H. L. Schrever, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p486-489.

Stress-Strain Curves for Brick Masonry in Biaxial Com-pression, Krishna Naraine and Sachchidanand Sinha, ST June 92, p1451-1461.

ST June 92, p1451-1461.
Structural Design of the GN&C Navigation Base for the Space Station Freedom, Lavonia Grant and Fred Cutting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p839-849.
Temperature-Independent Relationships for Frozen Soils, H. Wijeweera and R. C. Joshi, CR Mar. 92, p1-21.
Thermal Analysis for RCC—A Practical Approach, Stephen Tatro and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p389-406.
Thermal-Structural Analysis Methods for RCC Dams, P.

McLean, ed., 1992), p.899-400.

Thermal-Structural Analysis Methods for RCC Dams, P.
R. Barrett, H. Foadian, R. J. James and Y. R. Rashid,
(Roller Compacted Concrete III, Kenneth D. Hansen,
ed. and Francis G. McLean, ed., 1992), p407-422.

Use of Engineering Strain and Treffix Theory in Buckling
of Columns, C. M. Wang and W. A. M. Alwis, EM Oct.
92, p2135-2140.

Wheel Locks from Histophyay Bridge Strains, Field Studies.

Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771.

Strain distribution Stochastic Finite & Boundary Element Simulations, Gau-tam Dasgupta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p120-123

Use of Hierarchical Lattices for Predicting the Fluid or Stress Transfer in Concrete, D. Breysse, D. Fokwa and G. Schlatter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p171-174.

ed. and John M. Nieuzwecki, ed., 1929, p. Strain energy
Fracture Toughness for Steel Fiber-Cement Paste Interfacial Zone, Mitsunori Kawamura and Shin-ichi Igarashi, MT Aug. 92, p227-239.

Large Deformation Elastic Behavior of Low-Density Solid Foams, William E. Warren and Andrew M. Kraynik, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p143-146.

Load-Duration Effects in Structural Lumber: Strain Energy Approach, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Sept. 92, p2351-2369.

Optimal Design for Plate Buckling, W. R. Spillers and Robert Levy, ST Mar. 90, p850-888.

Passive Acoustic Emission for Quantitative Evaluation of Density Passive Acoustic Emission for Quantitative Evaluation of Con-

Passive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Concretes, Michael A. Taylor, (Vondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl-12.

Strain gages
Field Evaluation of Strain Gauges in Asphalt Concrete
Pavements, Peter E. Sebaaly and Nader Tabatabaee,
(Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed.

estressed-Concrete Railway-Bridge Live-Load Strains, John F. Muller and Peter F. Dux, ST Feb. 92, p359-

Strain and Stress Measurements in Pavements, Matti Huhtala and Jari Pihlajamäki, (Road and Airport Pave-ment Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p229-243.

Strain hardening
Beam Strength Enhancement at Design Ductility Factor
Demands, Gaetano Russo, ST Dec. 90, p3402-3416.
Micromechanics Based Design for Pseudo StrainHardening in Cementitious Composites, Victor C. Li
and H. C. Wu, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p740-743.

Rate-Dependent Plasticity Representation for Energy-Absorbing Materials, Q. H. Zuo, A. K. Maji, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p151-154.

Shear Zone Formation and Slope Stability Analysis, Scott E. Shewbridge and Nicholas Sitar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370.

Steady-State and Multiple Cracking of Short Random Fiber Composites, Victor C. Li and Christopher K. Y. Leung, EM Nov. 92, p2246-2264.

## Strain rate

Comparative Evaluation of Plasticity Theories Against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.236-239.

Comparative Evaluation of Plasticity Theories against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, EM Oct. 92, p2104-2126.

Gaunio and Kerry S. Havner, EM Oct. 92, p2104-2126. Constitutive Modeling and Simulation of Energy Absorbing Polyurethane Foam Under Impact Loading, James A. Sherwood and Colin C. Frost, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158.

Effect of Strain Rate on Cold-Formed Steel Stub Col-umns, M. Kassar, C. L. Pan and W. W. Yu, ST Nov. 92, p3151-3168.

Effect of Strain Rate on Material Properties of Sheet Steels, M. Kassar and W. W. Yu, ST Nov. 92, p3136-3150.

Extended Split-Hopkinson Bar Analysis for Attenuating Materials, Conrad W. Felice, Edward S. Gaffney and Joseph A. Brown, EM May 91, p1119-1135.

Rate Effects in Uniaxial Dynamic Compression of Concrete, Tianxi Tang, Lawrence E. Malvern and David A. Jenkins, EM Jan. 92, p108-124.

Softening Models for Concrete: Stability and Uniqueness, Donald R. Curran, James K. Gran, Lynn Seaman and Tarabay H. Antoun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p359-

Temperature-Independent Relationships for Frozen Soils, H. Wijeweera and R. C. Joshi, CR Mar. 92, p1-21.

Strain softening
Compression Failure of Quasibrittle Material: Nonlocal
Microplane Model, Zdeněk P. Bažant and Joško
Ožbolt, EM Mar. 92, p540-556.

Ozzout, Em Mar. 92, p349-306.
Compressive Softening Model for Concrete, Eiji Mizuno and Shigemitsu Hatanaka, EM Aug. 92, p1546-1563.
Computational Gradient Plasticity, R. de Borst, H. -B. Mühlhaus and J. Pamin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p776-779.

Crack Band Based Model for FEM Analysis of Concrete Structures, Grzegorz Gajer and Peter F. Dux, ST June 90, p1696-1714.

Direct Tensile Test: Stability and Bifurcation, Zdeněk P. Bažant and Luigi Cedolin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p357-360.

1992, p.537-300.
Discontinuous Deformation Slope Stability Analyses, An-Bin Huang and Max Y. Ma, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p479-492.
Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, N. Navayogarajah, C. S. Desai and P. D. Kiousis, EM May 92, p990-1011.

Kinematically Unconstrained Compression of Soft Clay, Richard J. Finno and Yongheun Rhee, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p143-157.

Micromechanics-Based Constitutive Model for Interface Shear, M. P. Divakar and A. Fafitis, EM July 92, p1317-1337.

Minimum Undrained Strength of Two Sands, J.-M. Kon-rad, GT June 90, p932-947.

Nonlinear Analysis of Strain-Softening Damage under Monotonic and Cyclic Loading, Zdeněk P. Bažant, Joško Ožboti and Rolf Eligehausen, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p490-493.

Numerical Implementation of Nonlocal Elastoplastic Damage Theory, H. Murakami and H. E. Read, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p248-251.

On the Role of Dispersive Waves in Strain-Softening Media, L. J. Sluys and R. de Borst, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p624-627.

Shear Zone Formation and Slope Stability Analysis, Scott E. Shewbridge and Nicholas Sitar, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), 9358-370. Strain-Softening Behavior of Granular Soil in Strain-Path Testing, J. Chu, S.-C. R. Lo and I. K. Lee, GT Feb. 92, p191-208.

Mave Propagation in a Nonlocal Strain-Softening Continuum, Gilles Pijaudier-Cabot and Antonio Huerta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p620-623.

Niedzwecki, cu., 1792, po20-023.

Strategic planning
Basic Planning and Design of a Water Utility Information
System, Chun-Hou Orr, Bryan Coulbeck, Sergio T.
Coelho and Helena Alegre, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p340-345.

Canada's Green Plan: Unique Approach to Preserving
Environment, Thomas J. Selinger, El Oct. 92, p349360.

Environment, Thomas J. Selinger, El Oct. 92, p349360.

Characterization of Emplacement Strategies for Luna
and Mars Missions, L. A. Pieniazek and L. D. Toups,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1631-1644.

The DOE Office of Environmental Restoration and
Waste Management Comprehensive Integrated Planning Process, Richard J. Aiken, Cyril W. Draffin, Jr.
and Karl T. Pflock, (High Level Radioactive Waste Management Program Committee, 1992), p1555-1558.

An Integrated Approach to Strategic Planning in the Civilian High-Level Radioactive Waste Management Program Committee, 1992, p1559-1564.

NaSA's Future Plans for Space Astronomy and Astrophysics, Michael S. Kaplan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992),
p1789-1797.

Securing Strategic National Security Objectives Through
Macitimes Activities C. G. Pherspropose and T. Id.

Macitimes A. Strategic Capter Parameters and T. Id.

Miller, ed. T. Id.

Miller, ed. T. Id.

Macitimes Activities C. G. Pherspropose and T. Id.

Maritime Activities, S. G. Phernambuco and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-

321.
Strategic Planning for Technology Development, Eitan S. Agai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1036-1041.
Strategic Planning for Transportation Under the NWPA: A State Perspective, Douglas Larson and Jim Miernyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1730-1736.
Strategies for Technology Push: Lessons from Construction Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.
Vertical Business Integration Strategies for Construction,

Vertical Business Integration Strategies for Construction, Robert C. Krippaehne, Bob G. McCullouch and Jorge A. Vanegas, ME Apr. 92, p153-166.

# Stratification

Straturation

Boundary Conditions for Sediment-Laden Flows, Marcelo H. Garcia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p404

A09.

Destruction of Stratification By Bubble Plume, W. D. Baines and A. M. Leitch, HY Apr. 92, p559-577.

Physical and 2-D Computer Models of Skimmer Curtain Effects on Lewiston Reservoir and Outlet Temperatures, Russ T. Brown, Gus Yates and Perry Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p507-513.

Tidal Influence on the Stratification of the Miramichi Estuary, A. St-Hilaire, C. Bettignies, D. Booth and E. M. P. Chadwick, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p953-958.

Stratified flow
Boundary Conditions for Sediment-Laden Flows, Marcelo H. Garcia, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p404-

The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, Boris Galperia, Alan F. Blumberg and Robert H. Weisberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, p. 323-343. Modeling Vertical Structure of Open-Channel Flows, Alan F. Blumberg, Boris Galperin and Donald J. O'Connor, HY Aug. 92, p. 1119-1134. Numerical Modeling of Withdrawals at Large Dams, Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p. 341-346.

346.
Physical and 2-D Computer Models of Skimmer Curtain Effects on Lewiston Reservoir and Outlet Temperatures, Russ T. Brown, Gus Yates and Perry Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p507-513.
Three-Dimensional Thermal Jump in Stratified Cooling Channel, L. -L. Guo and R. E. Baddour, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p381-384.

Stream channels
International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teresa Bowen MacArthur, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p569-574.

Stream erosion Evaluation of Erosion Potential at Pipeline Crossings, David T. Williams, Samuel Carreon, Jr. and Jeffrey B. Bradley, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694.

Resource—In Search of Southons, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694.

Stream gaging
A Brief Literature Review of Open-Channel Current Meter Testing, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p458-463.

Characteristics of U.S. Geological Survey Discharge Measurements for Water Year 1990, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p452-457.

Rainfall-Runoff Relations for the Puget Sound Area, R. S. Dinicola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p890-894.

Trends in Streamflow Due to Wetland Drainage, Abdul Khan and Miganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p476-481.

WSPRO Files for Slope-Area Computations, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334.

Stream improvement
Highway Construction and a Trout Stream Relocation,
James Seksinsky, Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p413-

Streambed armoring
Incipient Motion during Static Armoring, Anders
Wörman, HY Mar. 92, p496-501.

Streambeds
Incipient Motion during Static Armoring, Anders Wörman, HY Mar. 92, p496-501.
The Influence of Rectangular Pier Foundation on Local Scour, A. C. Parola, D. A. Schaefer, A. El-Khoury and B. M. Brown, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p132-137.
Routing of Heterogeneous Sediments over Movable Bed: Model Development, Andre van Niekerk, Koen R. Vogel, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p246-262.
Routing of Heterogeneous Sediments over Movable Bed: Model Verification, Koen R. Vogel, Andre van Niekrk, Kudy L. Slingerland and John S. Bridge, HY Feb. 92, p263-279.

Temporal Variation of Scour Around Circular Bridge Piers, Umesh C. Kothyari, Ramchandra J. Garde and Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.

Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.

Streamflow
Conceptual Basis of Seasonal Streamflow Time Series
Models, Jose D. Salas and J. T. B. Obeysekera, HY
Aug. 92, p1186-1194.

Distribution of Wetland Hydrologic Parameters, Misganaw Demissic and Abdul Khan, (Hydraulic Engimeering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992, p470-473.

Hydrologic Assessment for Riparian Restoration Projects, Douglas Hamilton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p624-629.

Improved Techniques in Regression-Based Streamflow
Volume Forecasting, David C. Garen, WR Nov/Dec.
92, p654-670.

Physically Based Flood Features and Frequencies, Hsieh
Wen Shen, Gregory John Koch and Jayantha T. B.
Obeysekera, HY Apr. 90, p494-514.

Rainfall-Runoff Relations for the Puget Sound Area, R. S.
Dinicola, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p890-894.

Salinity of Rivers: Transfer Function—Noise Approach,
Dolores Quilez, Ramón Aragilés and Kenneth K. Tanji,
IR May/June 92, p343-359.

Stability Problems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller, (Hydraulic Engeneering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p846-851.

Stepwise Disaggregation Scheme for Synthetic Hydrology, Emidio G. Santos and Jose D. Salas, HY May 92,
p765-784.

Trends in Streamflow Due to Wetland Drainage, Abdul
Khan and Misganaw Demissis, (Hydraulic Engineering).

p 103-184. Trends in Streamflow Due to Wetland Drainage, Abdul Khan and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p476-481.

ed., 1992), p476-481.

Streamflow forecasting
Adaptive Parameter Estimation for Multisite Hydrologic
Forecasting, Haitham M. Awwad and Juan B. Valdes,
HY Sept. 92, p1201-1221.

Nonparametric Framework for Long-Range Streamflow
Forecasting, J. A. Smith, G. N. Day and M. D. Kane,
WR Jan. Feb. 92, p82-92.

Probability and Climatology of Droughts in the Western
United States, Hugo A. Loaiciga, (Water Resource:
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p119-129.

Real-Time Operation of Tanshui River Reservoirs, JanTai Kuo, Nien-Sheng Hsu, Wen-sen Chu, Shian Wan
and Youn-Jan Lin, WR May/June 90, p349-361.

Streamflow Forecasting Using Trainable Neural Networks, Jason Smith and Robert N. Eli, (Water Resource:
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p56-61.

Streamflow generation models

Streamflow generation models
Maximum and Minimum Storage Trajectories That Meet
Specific Risk Levels, Laura Fagherazzi, Jean-Claude
Rassam and Andre Turgeon, (Risk-Based Decision
Making in Water Resources V, Yacov Y, Haimes, ed.,
David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992),
p284-303.

mflow records

Streamfor Reservoirs—A Probabilistic Approach, Hormoz Pazwash, (Water Resource Planning and Management Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p549-554.

Streams
Accumulation Effects of Stormwater Management Detention Basins, Robert G. Traver and Ronald A. Chadderton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p925-930.
Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p. 139-

Fractal Concept Used in Time-of-Concentration Esti-mates, Gert Aron, James E. Ball and Thomas A. Smith, IR Sept./Oct. 91, p635-641.

Levels of Service Applied to Urban Streams, H. Rooney Malcom and Cynthia C. Lancaster, WR July/Aug. 91.

p+82-497.

Loop Rating Curves from Goodwin Creek, Roger A.

Kuhnle and Andrew J. Bowie, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p741-746.

Mean Size Distribution of Bed Load on Goodwin Creek, Roger A. Kuhnle and Joe C. Willis, HY Oct. 92, p1443-1446.

Roger A. Kuhnle and Joe C. Willis, HY Oct. 92, p1443-1446.
Modeling DO Conditions in Streams with Dispersion, Antonis D. Koussis, Prashant Kokitkar and Adosh Mehta, EE May/June 90, p601-614.
Modified QUAL2E Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, Rex A. Tolman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p194-199.
New Look at Regional Flood-Frequency Relations for Arid Lands, Hjalmar W. Hjalmarson and Blakemore E. Thomas, HY June 92, p868-886.
A Novel Tracer Injector for Surface Water Studies, Cynthia J. Baker and Deborah J. Mossman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p410-415.
Properties of Various Sediment Sampling Procedures, Panayiotis Diplas and Jon B. Fripp, HY July 92, p955-970.

Panayiotis Diplas and Jon B. Fripp, HY July 92, p955-970.

Fiprap Stability Under Impinging Flow, James R. Leech, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p138.

Scour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, Michael J. Fraher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69.

Seepage Effects on Bridge Pier Scour, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p899-700.

Surface Sampling of Dry and Underwater Sediment Deposits, Jon Fripp and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

Texas Bridge Scour Evaluation Program, Stephen B. Olona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

Discharge Capacity for Curb-Opening Inlets, Ali Uyu-maz, HY July 92, p1048-1051. Signing Systems: Directional, Identity, and Graphic Sys-tems for the Port of Long Beach, Mackey W. Deasy, Wayne Hunt and Louis Rubenstein, (*Ports '92*, David Torseth, ed., 1992), p85-93.

Strength
Adding Up Admixtures, Paul Tarricone, CE May 92,
p48-51.

p48-31.

Beam Strength Enhancement at Design Ductility Factor Demands, Gaetano Russo, ST Dec. 90, p3402-3416.

Bracing Requirements of Plane Frames, Shyi-Lin Lee and P. K. Basu, ST June 92, p1527-1546.

Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Concreting at Subfreezing Temperatures, Charles J. Korhonen, Edel R. Cortez and Brian A. Charest, Materials: Performance and Pervention of Deficiencies and Failures, Thomas D. White, ed., 1992), p382-397.

Effect of Strain Rate on Cold-Formed Steel Stub Col-umns, M. Kassar, C. L. Pan and W. W. Yu, ST Nov. 92, p3151-3168.

Effective Strength of 'Square-and-Diagnonal' Double-Layer Grid, Toshitsugu Saka and Yoshiya Taniguchi, ST Jan. 92, p52-72.

ST Jan. 92, p32-72. Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, Steven W. Perkins, Stein Sture and Hon Yim Ko, Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-200.

1992, p169-220.
Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1250-1261.
Factors Controlling Properties and Durability of Concretionary Laterite Gravel Aggregates, Enuvie G. Akpokodje and Peter P. Hudec, MT Feb. 92, p58-70.

ber Ropes for Ocean Engineering in the 21st Century, John F. Flory, Henry A. McKenna and Mike R. Parsey, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p934-947.

Fracture Mechanics and Size Effect of Concrete in Ten-sion, Tianxi Tang, Surendra P. Shah and Chengsheng Ouyang, ST Nov. 92, p3169-3185.

Fracture-Based Two-Way Debonding Model for Discontinuous Fibers in Elastic Matrix, Christopher K. Y. Leung, EM Nov. 92, p2298-2318.

Free Boundary, Fluid Flow, and Seepage Forces in Excavations, Ronaldo I. Borja, GT Jan. 92, p125-146.

vations, konaido I. Borja, O.I. Jan. 74, p122-140.
Fundamental Observations on Cement Based Grouts (1):
Traditional Materials, B. De Paoli, B. Bosco, R. Granata and D. A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p474-485.

Geosynthetic Strength—Ultimate and Serviceability Limit State Design, R. J. Fannin and S. Hermann, Gibility and Performance of Slopes and Embankments II. Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992, p.1411-1426.

High-Temperature Properties of Fire-Resistant Steel for Buildings, Y. Sakumoto, T. Yamaguchi, M. Ohashi and H. Saito, ST Feb. 92, p392-407.

Hygrothermal Effects on Load-Duration Behavior of Structural Lumber, Kenneth J. Fridley, R. C. Tang, Lawrence A. Solits and Chai H. Yoo, ST Apr. 92, p1023-1038.

Hygrothermal Effects on Mechanical Properties of Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Feb. 92, p567-581.

Hysteretic Response of Reinforced-Concrete Infilled Frames, Sinan Altin, Ugur Ersoy and Tugrul Tankut, ST Aug. 92, p2133-2150.

Kettleman Hills Waste Landfill Slope Failure. I: Liner-System Properties, James K. Mitchell, Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-668.

secu and rl. Boiton Seed, UI Apr. 90, 9647-668. Mechanical Properties of Compacted Lunar Simulant Using New Vacuum Triaxial Equipment, Chandra S. Desai, Hamid Saadatmanesh and Tom Allen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1240-1249.

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. I: Theory, Ching S. Chang, Yang Chang and Mohammed G. Kabir, GT Dec. 92, p1959-1974.

Minimum Undrained Strength of Two Sands, J.-M. Kon-rad, GT June 90, p932-947. Minimum Undrained Strength Versus Steady-State Strength of Sands, J.-M. Konrad, GT June 90, p948-

963. Mixing and Delivery of Roller Compacted Concrete, Robert Oury and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p242-257.Pullout Testing of High-Strength Concrete Members, Ronald L. Dilly and Michael Abshire, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p194-205.

558

RCC Mixes and Properties Using Poor Quality Materials-Concepcion Dam, L. Gackel and E. Schrader, (Roll-er Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p358-373.
Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-

1412

Strength and Behavior of Slender Steel Pipe under Pre-stressing Force, Zenon A. Zielinski and Hamid Mobasher-Fard, ST Oct. 92, p2911-2926. Strength and Ductility of Confined Concrete, Murat Saatcioglu and Salim R. Razvi, ST June 92, p1590-1402.

Strength and Efficiency of Wood Box Columns, D. B. Van Dyer, ST Mar. 92, p716-722.

Dyer, ST Mar. 92, p716-722.

Strength and Fracture of Glass in the Lunar Environment, Daniel D. Allen, W. Howard Poisl and Brian D. Fabes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1232-1239.

Strength of Composite Slabs, W. Samuel Easterling and Craig S. Young, ST Sept. 92, p2370-2389.

Temperature-Independent Relationships for Frozen Soils, H. Wijeweera and R. C. Joshi, CR Mar. 92, p1-21.

Use of the Break-Off Method for the Evaluation of High Performance Concrete, Tarun R. Naik and Amr S. Hassaballah, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p92-106.

p92-106. Utilization of Fly Ash in High Volumes for Low Strength Cement Composites, P. Balsguru, (Utilization of Waster Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p308-319.

Antiplane Problems of Monoclinic Material, Chien-Ching Ma, EM Sept. 92, p1765-1782.

Axisymmetric General Shells and Jointed Shells of Revolution, Pei Jianping and Issam E. Harik, ST Nov. 92, p3186-3202.

Behaviour of Prestressed Concrete End Blocks, T. J. Ibell and C. J. Burgoyne, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p135-

Bending of Thin Plate with Three-Point Support, Alexander Azarkhin, ST May 92, p1416-1419.
Comparative Evaluation of Plasticity Theories Against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p236-239.

Comparative Evaluation of Plasticity Theories against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, EM Oct. 92, p2104-2126.

Computer Simulation of Dry Layered Granular Flow Down an Incline Composed of Grains, Chi-Hai Ling and Chyan-Deng Jan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p760-763.

Concrete Box Sections Under Biaxial Bending and Axial Load, Cengiz Dundar, ST Mar. 90, p860-865.

Constitutive Behavior of Stress-Induced Anisotropic Co-hesive Soil, Jeff S. Budiman, Stein Sture and Hon-Yim Ko, GT Sept. 92, pl.348-1359.

Critical Stresses in Pintle, Weldment and Top Head of Nuclear Waste Container, Samaan G. Ladkany and Brett R. Kniss, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1253-1260.

Program Committee, 1992), p1233-1260.

Elastic Buckling Coefficients for Long, Unstiffened Plates, Julie Mark Cohen, EM Dec. 92, p2491-2496.

Failure Criteria Interpretation Based on Mohr-Coulomb Friction, D. V. Griffiths, GT June 90, p986-999.

Failure Prediction of Anisotropic Material, Photios P. Papados and Paul N. Roschke, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1012-1015.

Fatigue Strength of Deteriorated Steel Highway Bridges, Patrick D. Zuraski and John E. Johnson, ST Oct. 90, p2671-2690.

Finite Element Modeling of Concrete Expansion and Confinement, F. J. Vecchio, ST Sept. 92, p2390-2406. Formulas for Shear-Lag Effect of T-, and I-, and Box Beams, Qi-gen Song and Alexander C. Scordelis, ST May 90, p1306-1318.

Free-Bending Fatigue Life Estimation of Cables at Points of Fixity, Mohammed Raoof, EM Sept. 92, p1747-1764

of Fixity, Mohammed Raoof, EM Sept. 92, p1747-1764.
High-Order Theory for Sandwich-Beam Behavior with Transversely Flexible Core, Y. Frostig, M. Baruch, O. Vilnay and I. Sheimman, EM May 92, p1026-1043.
In-situ Stress and Strain Measurements in Dynamically Loaded Asphalt Pavement Structures, C. H. Vogelzang and S. R. Bouman, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p244-260.
Instability of Slopes with Nonassociated Flow, Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p288-291.
Interaction Between Soil and a Rigid Foundation in a Layered Medium: A New Analytical Approach, R. C. Zhang, Y. Yong and J. Yu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p384-587.
Large-Scale Loading Tests of Shallow Footings in Pneumatic Caisson, Osamu Kusakabe, Yoshito Maeda and Masatoshi Ohuchi, GT Nov. 92, p1681-1695.
Leakage Characteristics of the St. Jude Heart Valve, Theresa E. Brandner and Yi-Ren Woo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708.
Mechanics of Granular Materials at Very Low Effective Stress Levels, Stein Sture, Nicholas C. Costes and David F. McTique, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1038.
Moduli and Damping Factors of Soft Marine Clays.

Lutes, ed. p1035-1038

p1035-1038.

Moduli and Damping Factors of Soft Marine Clays,
Takaaki Kagawa, GT Sept. 92, p1360-1375.

Optimization of Discontinuous Fiber Composites, Victor
C. Li, M. Maalej and T. Hashida, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki,
ed., 1992), p1000-1003.

Pattern Formation and Time-Dependence in Flowing
Sand, R. P. Behringer and G. W. Baxter, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p1028-1030.

Prestress Level in Stress-Laminated Timber Bridges, Edward F. Sarisley and Michael L. Accorsi, ST Nov. 90,
p3003-3019.

Prestressed-Concrete Railway-Bridge Live-Load Strains.

estressed-Concrete Railway-Bridge Live-Load Strains, John F. Muller and Peter F. Dux, ST Feb. 92, p359-

Prevention of Stress Relaxation in Viscoelastic Struc-tures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

1852.

Probability of Crack Growth in Poisson Field of Penny Cracks, S. Mesarovic, D. Gasparini, S. Muju and M. McNelis, EM May 92, p961-978.

Random Aspect of the Stress Inside Granular Media, Claude Bacconnet and Roland Gourves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166.

Reliability of Portal Frames With Interacting Stress Resultants, Luis Miguel da Cruz Simões, ST Dec. 90, p3475-3496.

suitants, Luis Miguel da Cruz Simões, ST Dec. 90, p3475-3496.

Secondary Stresses in Closed Orthotropic Deck Ribs at Floor Beams, Roman Wolchuk and Alexis Ostapenko, ST Feb. 92, p582-595.

Shear-Stress Distribution in Symmetrically Tapered Cantilever Beam, Edwin P. Russo and Gregory Garic, ST Nov. 92, p3243-3249.

A Stochastic Model for Crack Initiation and Fatigue Life, Michael R. Emptage and Bevil J. Shaw, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p308-311.

Strain and Stress Measurements in Pavements, Matti Huhtala and Jari Pihlajamäki, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p229-243.

Stresses in Open Section Fiber Reinforced Composite Beams Under Constant Shear Loading, Albert G. Zvarick and Thomas A. Cruse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1067-1070.

Stresses Induced by Surficial and Deep Loading in Elastic Medium, Olivier Rossa and Gabriel Auvinet, GT Aug. 92, p1241-1246.

Stress-Strain Curves for Brick Masonry in Biaxial Composition, Krishna Naraine and Sachshidanand Sinha.

Stress-Strain Curves for Brick Masonry in Biaxial Com-pression, Krishna Naraine and Sachchidanand Sinha, ST June 92, p1451-1461. Temperature-Independent Relationships for Frozen Soils, H. Wijeweera and R. C. Joshi, CR Mar. 92, p1-21.

Thermal Analysis for RCC—A Practical Approach, Stephen Tatro and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p389-406.

Thermal-Structural Analysis Methods for RCC Dams, P. R. Barrett, H. Foadian, R. J. James and Y. R. Rashid, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p407-422.

Use of Engineering Strain and Trefftz Theory in Buckling of Columns, C. M. Wang and W. A. M. Alwis, EM Oct. 92, p2135-2140.

Variational Solutions of the Von Karman Plate Theory

92, p2133-2140.
Variational Solutions of the Von Karman Plate Theory Based on a Mixed Formulation, Wan-Lee Yin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p656-659.

Niedzwecki, ed., 1992), po50-659.

Stress analysis

Design Management and Stress Analysis of a Circular Rock Tunnel and Emplacement Holes for Storage of Spent Nuclear Fuel, Nadia Kandalaft-Ladkany and Richard V. Wyman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2260-2266.

Determination of In-Situ Stresses From Acoustic Emissions, A. K. Maji, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p405-408.

408.

Direct Analysis of Prestressed Concrete Members, A. S. Prasada Rao, ST Dec. 90, p3432-3447.

Fault Stress Analysis for the Yucca Mountain Site Characterization Project, S. J. Bauer, M. P. Hardy, R. Goodrich and M. Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277.

Formulas for Shear-Lag Effect of T., and I., and Box Beams, Qi-gen Song and Alexander C. Scordelis, ST May 90, p1306-1318.

LASSAP, Stress and Settlement Analysis and Design Program, Clarence Jiang, K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, (Computing in Civil Engineering and Geographic Information Systems Symphosium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1932), p426-433.

Nonlienar, Incremental Analysis of Olmsted Locks, Chris

um, Barry J. Goodno, ed. and Jett R. Wright, ed., 1992), p426-433.

Nonlienar, Incremental Analysis of Olmsted Locks, Chris A. Merrill and Sharon B. Garner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p921-928.

Novel Photoelastic Approach in Analysis of Elliptical Holes in Thick Plates, Sameh S. Issa and G. A. Maamoun, EM Aug. 92, p1631-1645.

Parallelisation of a Distinct Element Stress Analysis Program, Siong K. Tang, Gregory K. Egan and Michael A. Coulthard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p710-777.

Risk Based Optimal Fatigue Testing, J. D. Sørensen, M. H. Faber and I. B. Kroon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p523-526.

Roller Compacted Concrete Tailing Retention Dam, Daniel L. Johnson, Nigel A. Skermer and Frank Bergstrom, (Roller Compacted Concrete IIII, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p181-197.

p181-197.

p181-197.

p181-197.

A sphere Moving Down an Inclined Bumpy Surface, Chyan-Deng Jan, Hsieh Wen Shen, Chi-Hai Ling and Cheng-lung Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-

771.

Stability Analysis of an Earth Slope, T. William Lambe and Francisco Silva-Tulla, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p27-69.

Straight, Single-Tapered Composite I-Beams of Orthotropic Materials, Robert J. Leichti and Chai H. Yoo, MT Nov. 92, p399-414.

Stress Relaxation Analysis for Sealants, Chi-Ping Wang and Frank E. Weisgerber, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p240-243.

Stress concentration

An Elasticity Solution for a Transversely Isotropic Material Containing a Spherical Shell Under Arbitrary Axisymmetric Loading, J. -Y. Wang and S. M. Heinrich, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1020-1023.

Novel Photoelastic Approach in Analysis of Elliptical Holes in Thick Plates, Sameh S. Issa and G. A. Maamoun, EM Aug. 92, p1631-1645.

Structural Efficiency of Internally Ring-Stiffened Steel Tubular Joints, D. S. Ramachandra Murthy, A. G. Madhava Rao, P. Gandhi and P. K. Pant, ST Nov. 92, p3016-3035.

Torsional Stresses in Tubular Lap Joints with Tapered Adherends, D. Chen and S. Cheng, EM Sept. 92, p1962-1973.

p1902-1973.

Stress distribution

Adhesives and Structural Plastics, Robert B. Austin, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571.

Constitutive Equation for Granular Material by Hypocalasticity, R. K. Mysore and W. E. Falby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedtwecki, ed., 1992), p733-756.

Carchine and Debonding on Bimaterial Interface under

Cracking and Debonding on Bimaterial Interface under Uniform Loading, Mikiya Okumura, Norio Hasebe and Takuji Nakamura, EM June 92, pl 113-1128.

The Effective Stress Path for Soil at High Pressure, Jerry A. Yamamuro and Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p729-732.

Flexible Plates for Control of Stress Distribution, Nenad Gucunski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p592-595.

Homogeneous Structures Subjected to Repeated Structur-al System Changes, Luigino Dezi, Giovanni Menditto and Angelo Marcello Tarantino, EM Aug. 90, p1723-

A More Rational Approach to Pavements, Milton E. Harr, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p172-185.

On the Diffusional Stress Transmission, Włodzimierz Brzakała, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p175-178.

Use of Hierarchical Lattices for Predicting the Fluid or Stress Transfer in Concrete, D. Breysse, D. Fokwa and G. Schlatter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p171-174.

Stress anstory
Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. E Theory, Robert Y. Liang and Fengang Ma, GT Feb. 92, p229-245.

Anisotropic Plasticity Model for Undrained Cyclic Behavior of Clays. II: Verification, Robert Y. Liang and Fenggang Ma, GT Feb. 92, p246-265.

Stress intensity factor

Cracking and Debonding on Bimaterial Interface under Uniform Loading, Mikiya Okumura, Norio Hasebe and Takuji Nakamura, EM June 92, p1113-1128.

Microcrack Interaction Toughening in Ceramics and CMCs, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1016-1019.

1992), p1016-1019.
Probability of Crack Growth in Poisson Field of Penny Cracks, S. Mesarovic, D. Gasparini, S. Muju and M. McNelis, EM May 92, p961-978.
Stochastic FEM Based on Local Averages of Random Vector Fields, W. Q. Zhu, Y. J. Ren and W. Q. Wu, EM Mar. 92, p496-511.

Study of Three Dimensional Crack Tip Location of Mortar by Acoustic Emission, H. L. Chen and C. T. Cheng, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p.25-36.

Stress Transfer Within Granular Geomaterials, Gabriel Auvinet, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p159-162.

Generalized Creep and Stress Relaxation Model for Clays, Ronaldo I. Borja, GT Nov. 92, p1765-1786. Prevention of Stress Relaxation in Viscoelastic Struc-tures, Angelo Marcello Tarantino, ST July 92, p1840-1852.

Stress Relaxation Analysis for Sealants, Chi-Ping Wang and Frank E. Weisgerber, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p240-243.

Stress strain characteristics
Constitutive Modeling and Simulation of Energy Absorbing Polyurethane Foam Under Impact Loading, James A. Sherwood and Colin C. Frost, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158. Neural Network M

1992), p.135-138. eural Network Modeling of the Mechanical Behavior of Sand, Glenn W. Ellis, Chengwan Yao and Rongda Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p421-424.

Stress strain relations
Compressive Softening Model for Concrete, Eiji Mizuno and Shigemitsu Hatanaka, EM Aug. 92, p1546-1563.
Constitutive Model for Concrete in Strain Space, O. A. Pekau, Z. X. Zhang and G. T. Liu, EM Sept. 92, p1907-1927.

Elastoplastic Deformation for Particulates with Frictional Contacts, Ching S. Chang, Anii Misra and Kofi Acheampong, EM Aug. 92, p1692-1707.
Hypoplastic Model for Sands, J. P. Bardet, EM Sept. 90, p1973-1994.

p1973-1994.

Knowledge-Based Modeling of Material Behavior with
Neural Networks, J. Ghaboussi, J. H. Garrett, Jr. and
X. Wu, EM Jan. 91, p132-153.

Serviceability Analysis of Wood Beams with Creep,
David V. Rosowsky, Kenneth J. Fridley and Timothy
A. Philipot, (Probabilisti Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90.
Strength and Ductility of Confined Concrete, Murat
Saatcioglu and Salim R. Razvi, ST June 92, p1590-

1007.
Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.

Stress strain relations, soils

Constitutive Behavior of Stress-Induced Anisotropic Cohesive Soil, Jeff S. Budiman, Stein Sture and Hon-Yim Ko, GT Sept. 92, p. 1348-1359.

Development of Strain During Monotonic Shear of Soft Clay, Sam Frydman and Mark Talesnick, GT May 92, p704-725.

p704-725.

Extended Split-Hopkinson Bar Analysis for Attenuating Materials, Conrad W. Felice, Edward S. Gaffney and Joseph A. Brown, EM May 91, p1119-1135.

Fine Ottawa Sand: Experimental Behavior and Theoretical Predictions, Panos Dakoulas and Yuanhui Sun, GT Dec. 92, p1906-1923.

Kinematically Unconstrained Compression of Soft Clay, Richard J. Finno and Yongheun Rhee, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p143-157.

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. 1: Theory, Ching S. Chang, Yang Chang and Mohammed G. Kabir, GT Dec. 92, p1959-

Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, Ching S. Chang, Mo-hammed G. Kabir and Yang Chang, GT Dec. 92, p1973-1992.

p1975-1992.
Numerical Study of Soil Anisotropy, A. Anandarajah, EM Jan. 92, p211-216.
Stabilized Active Clay by Sand Admixture, Pat T. Leelani, Maen M. Shaar and Phil V. Compton, (Grouing, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1042-1053.
State-of-the-Art: Static Stability and Deformation Analysis. I Michael Company.

1972), ploa2-1972, ploa2-19

and Ross w. Boulanger, ed., 1972.), page 2009.

Stress waves

Damage Assessment in Concrete Using Acoustic Emission, C. Ouyang, E. Landis and S. P. Shah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p13-24. Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelps, (Materialis: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p519-531.

A New NDT Device for Comprehensive Pavement Maintenance (Theoretical Aspects), S. Nazarian and M. Baker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p948-951.

Nondestructive Crack Identification by Acoustic Emission Analysis and Ultrasonic Frequency Response, Massyasu Ohtsu and Yasunori Sakata, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl71-181.
Passive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Concretes, Michael A. Taylor, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), pl-12.

Sonic NDE of Structural Concrete, Larry D. Olson, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p70-81.

Study of Three Dimensional Crack Tip Location of Mor-tar by Acoustic Emission, H. L. Chen and C. T. Cheng, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p25-36.

13924, p.23-30.
A Theoretical Approach to Characterize Reinforced Concrete Using Stress Waves, J. S. Popovics, J. L. Rose and A. Pilarski, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p492-504.

tress-strain cr

Stress-strain curves
Normal- and High-Strength Fiber-Reinforced Concrete
under Compression, A. Samer Ezeldin and Perumalsamy N. Balaguru, MT Nov. 92, p415-429.
Single-Hardening Model with Application to NC Clay,
Poul V. Lade, GT Mar. 90, p394-414.
Stress-Strain Curves for Brick Masonry in Biaxial Compression, Krishan Naraine and Sachchidanand Sinha,
ST June 92, p1451-1461.

St June 92, p1451-1461.

Stripping
Integrated Remediation of Soil and Groundwater, Russell
S. Dykes and Arlin C. Howles, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p244-249.
Oxygen Transfer and VOC Emissions from Sewer Drop Structures, Richard L. Corsi, Jennifer Shepherd, Lori Kalich, Hugh Monteith and Henryk Melcer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p305-310.
Removal of VOCs and TEL in Iron-Rich Groundwaters, James E. Rumbo, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p116-121.

Stripper Makes Paint Removal Less of a Blast, CE Apr. 92, p85.

Stroatism Effect of Solid-Phase Selectivity on Sorption of Cobalt and Strontium by Zeolitized Tuff, M. Gopala Rao, P. C. Das, E. U. Honga and A. E. Helou, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1587-1592.

pl38/-1392.

Strontium Isotope Geochemistry of Calcite Fracture Fillings in Deep Core, Yucca Mountain, Nevada—A Progress Report, Z. E. Peterman, J. S. Stuckless, B. D. Marshall, S. A. Mahan and K. Futa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1582-1586

tructural analysis

Nalyses of Complex Buildings on Micros, Istvan Kadar and Ricardo A. A. Todeschini, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p551-557.

ed., 1774, 9331-357.

Analysis of the Georgia Dome Cable Roof, Gerardo Castro and Matthys P. Levy, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p566-573.

Bargain Package for Smaller Structures, David Angelotti, CC July 92, p1-9.

CC July 92, pl-9.

Boundary-Element Direct Reanalysis for Continuum Structures, J. H. Kane, B. L. Keshava Kumar and R. H. Gallagher, EM Aug. 92, pl679-1691.

Computation of the Least Eigenvalue on a Memory-Sharing Multiprocessor Computer, Jenn-Ching Luo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p754-761.

Computer Analysis of the East Huntington Cable-Stayed Bridge, Hany J. Farran and William Lai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p687-694.
Concurrent Optimization of Large Structures. I: Algorithms, Hojiat Adeli and Osama Kamal, AS Jan. 92, p79-90.

Concurrent Optimization of Large Structures. II. Applica-tions, Hojjat Adeli and Osama Kamal, AS Jan. 92, p91-110.

p91-110.

A Coordinate Reduction Technique With Mass Correction for Dynamic Analysis of Structural Systems, Wenlung Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p61-64.

Design of Oak Point Link Railroad Trestle, Eugene Pollner and Kim Plumacher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809.

Distortional Buckling Solutions for Continuous Composite Beams, Mark Andrew Bradford and Zhi Gao, ST Jan, 92, p73-89.

A Fatigue Reliability Model for Railway Bridges, A.

Jan. 92, p73-89.

A Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p320-323.

Glueware, Brian Brenner and Cynthia Gagnon, (Computing in Criti Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1220-1225.

Homogeneous Structures Subjected to Repeated Structural System Changes, Luigino Dezi, Giovanni Menditto and Angelo Marcello Tarantino, EM Aug. 90, p1723-1732.

LAN Ho! Structural Analysis on a Network, Suresh K. Sharma and John W. Baudh, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 9639-646.

Microcomputer Analysis of Guyed Towers as Lattices, Raja R. A. Issa and R. Richard Avent, ST Apr. 91, p1238-1256.

The Microstructure of Hardened Cement Paste and Concrete, J. Francis Young, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p737-739.

D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p737-739.

Modeling and Analysis of Doubly Curved Aerobrake Truss Structures, Gregory Washington and Eric Klang, Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p933-544.

Modeling the Stiffness of Pile Group Foundations, Toorak Zokaie and Karl M. Romstad, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p810-817.

Neural Network Based Classifiers in Vibrational Signature Analysis, M. F. Elkordy, K. C. Chang and G. C. Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073.

Neural Networks in Dynamic Analysis of Bridges, Stuart S. Chen and Ketan Shah, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1058-1065.

Nonlinear Eigensolver for Exact Vibration Analysis, H. A. Smith D. C. Sonesses and Market Standards.

1992), p1038-1065.

Nonlinear Eigensolver for Exact Vibration Analysis, H.

A. Smith, D. C. Sorensen and R. K. Singh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p920-923.

Nonlinear Structural Analysis on a Distributed System. Eric M. Lui and Fred H. Schlereth, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p647-654.

Novel Aerophake Design for a Men Lander Leb. T.

A Novel Aerobrake Design for a Mars Lander, John E. Crawford, Ralph G. Colbert and Manual I. Cruz, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p862-872.

Parallelization of Linear Finite Element Analysis, Gwo-long Lai and Fisin-Chu Chen, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p655-662.

Parameter Estimation in Complex Linear Structures, M. R. Banan, M. Banan and K. D. Hjeitstad, (Probabilistic Mechanics and Structural and Geostechnical Reliability, Y. K. Lin, ed., 1992), p571-574.

PREPS: Analysis of Pipe Supports and Other Structures on the PC-386, Gregory Nakhimovsky and Charles E. Doherty, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p543-550.

Prestressed Composite Girders. II: Analytical Study for Negative Moment, Bilal M. Ayyub, Young G. Sohn and Hamid Saadatmanesh, ST Oct. 92, p2763-2783.

Probabilistic Assessment of Composite Structures, Christos C. Chamis and Michael C. -Y. Shiao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p543-547.

Probing the Golden Gate, Mark A. Ketchum and Al Heldermon, CE June 91, p42-45.

Recent Experiences in PC Software Development, Kenneth M. Will, Asquit Bailey and Timothy Dodd, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1795-1203.

Regularization Methods for Identification of Structural Damage, H. G. Natke and J. T. P. Yao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p676-680.

Second-Order Inelastic Analysis Methods for Steel-Frame Design, W. S. King, D. W. White and W. F. Chen. ST

Niedzwecki, ed., 1992, p6/6-680.

Second-Order Inelastic Analysis Methods for Steel-Frame Design. W. S. King, D. W. White and W. F. Chen, ST Feb. 92, p408-428.

Service Load Behavior of Concrete Members Prestressed with Unbonded Tendons, M. H. Harajli and M. Y. Kanj, ST Sept. 92, p2569-2589.

A Shear Locking Free Three-Node Triangular Plate Bending Element for Moderately-Thick and Thin Symmetrically Cross-Ply Laminated Plates, Humayun R. H. Kabir, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p552-555.

Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsam, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p215-225.

Simplified Building Analysis with Sequential Dead

Simplified Building Analysis with Sequential Dead Loads—CFM, Chang-Koon Choi, Hye-Kyo Chung, Dong-Guen Lee and E. L. Wilson, ST Apr. 92, p944-

Simplified Methods for Assessment of the Structural Integrity of Existing Steel Jacket Platforms in the Gulf of Mexico, Rajiv K. Aggarwal, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p750-769.

A Spacer Grid Hysteretic Model for the Structural Analysis of Spent Fuel Assemblies Under Impact: SAND91-2528C, TTC-1114, Peter R. Barrett, I. Kurichubasche and Kevin D. Seager, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2249-2254.

Spatial and Temporal Aspects of Qualitative Structural Reasoning, David I. Schwartz and Stuart S. Chen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p277-284.

Statically Determinate Trusses Programmed in Logic,

Statically Determinate Trusses Programmed in Logic, Vlasis K. Koumousis and Panos G. Georgiou, CP Oct. 92, p435-455.

Vasas S. Nouthouses and ratios G. Georgioti, C. P. Ceit, 22, p435-455.

Structural Characterization of an Articulated-Truss Joint, Thomas R. Sutter, K. Chauncey Wu, Kevin T. Riutort, Joseph B. Laufer and James E. Phelps, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p296-307.

Structural Optimization in a Distributed Computing Environment, B. K. Voon and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p778-785.

Structural Studies of Two Aerobrake Heatshield Panel Concepts, John T. Dorsey and James W. Dyess, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932.

Structural System Control Using Neural Networks, Dan-

Structural System Control Using Neural Networks, Dan-iel R. Rehak and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p864-871.

Utilization of Economical Slopes for Jordanelle Dam, John A. Wilson, William O. Engemoen, Francis G. McLean and Perry J. Hensley, (Stability and Perform-ance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653-668.

ance of Stopes and Embansments II, Agrithon b. Seci, ed. and Ross W. Boulanger, ed., 1992), p653-668.

Structural behavior
A Case of the Shakes, Anthony C. Webster and Matthys P. Levy, CE Feb. 92, p58-60.

Case Studies of Structures with Man-Induced Vibrations, H. Bachmann, ST Mar. 92, p631-647.

Condition Monitoring of Structures Using Transient Response, George Hearn, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p127-138 on Viscoelastically Damped Structure, K. C. Chang, T. T. Soong, S.-T. Oh and M. L. Lai, ST July 92, p1955-1973.

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, Richard S. Haupt and Dale C. Bull, (Road and Airport Pawment Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p125-137.

Measured to the Max, Robert Nigbor, Ahmet Cakmak and Robert A. Eaton, ed., 1992, p125-137.

Predicting Behavior of Cyclically Loaded RC Structures, William K. Rule and Robert E. Rowlands, ST Feb. 92, p603-616.

p603-616.

Probabilistic Description of Buffeting Response of Long-Span Bridges, Friedrich J. Wall and Christian G. Buch-er, EM Dec. 92, p2401-2420.

er, EM Dec. 92, p2401-2420.

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441.

QLRS: An Approach for Qualitative Interpretation of Lateral Load Resisting Systems, Renate Fruchter and Helmut Krawinkler. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p253-260.

Walking of Flatwork on Expansive Soils Robert W. Popping States and St

Walking of Flatwork on Expansive Soils, Robert W. Day, CF Feb. 92, p52-57.

tructural control

Bifurcations and Chaos in Structural Control, K. Hackl, A. Cheng, C. Y. Yang and M. Chajes, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki,

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p664-667.
Effect of Active Control on Closely Spaced Natural Frequencies, K. Xu, P. Warnitchai and T. Igusa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p693-696.
Effect of Active Control to Structural Reliability, J. T. P. Yao and H. G. Natke, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p373-376.
Domain Ontimal Control of Wind-Evolution

1992, p5/5-376.
Frequency Domain Optimal Control of Wind-Excited Buildings, J. Suhardjo, B. F. Spencer, Jr. and A. Kareem, EM Dec. 92, p2463-2481.
Frequency Response of Disordered Periodic Structures, G. Q. Cai and Y. K. Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p796-799.

1992, p. 1996-199.
Interaction Effects in the Hybrid Control of Euler-Bernoulli Beams, S. T. Pang, T. -C. Tsao and L. A. Bergman, [Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p820-823.
Planning for Construction Automation by Integrating Information Flow with Software and Hardware Controls, America Singh (Computing in Civil Feedings)

Planning for Construction Automation by Integrating Information Flow with Software and Hardware Controls, Amarjit Singh, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p856-863. Recent Findings in Active Structural Control, Craig A. Rogers, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p824-827. Reliability of Controlled Structures Subject to Real Parameter Uncertainties, B. F. Spencer, Jr., C. Montemagno, M. K. Sain and P. M. Sain, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p369-372.

Structural Control Design in the Presence of Time Delays, P. M. Sain, B. F. Spencer, Jr., M. K. Sain and J. Subardjo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815.

Structural Control Under Stochastic Seismic Loads, J. N. Yang, Z. Li and S. Vongchavalitkul, (Engineering Mechanics, Loren D. Lutes, ed., 1992), p828-831.

Structural System Control Using Neural Networks, Daniel R. Rehak and James H. Garrett, Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p864-871.

Time-Delay Effect on Dynamic Response of Actively Controlled Structures, Surji S. Dhillon and William C. Lennox, AS Oct. 92, p450-464.

Vibration Control of Beams with Embedded Smart Composite Material, M. Arockiasamy, P. S. Neelakanta and G. Sreenivasan, AS Oct. 92, p492-498.

Structural design
Analysis of Circular RC Columns for Short- and LongTerm Deformations, Mark Andrew Bradford and R.
Ian Gilbert, ST Mar. 92, p669-683.

Analysis of the Georgia Dome Cable Roof, Gerardo Cas-tro and Matthys P. Levy, (Computing in Civil Engineer-ing and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.566-573.

Application of a Dolos Structural Design Procedure, Jeffrey A. Melby, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p830-846.

Axisymmetric Buckling of Pressure-Loaded Spherical Caps, Paulo B. Gonçalves and James G. A. Croll, ST Apr. 92, p970-985.

Bargain Package for Smaller Structures, David Angelotti, CC July 92, p1-9.

Classical Buckling Load of Spherical Domes Under Uni-form Pressure, Haruo Kunieda, EM Aug. 92, p1513-1525.

Communication Protocol in Structural Design Objects, Jamal A. Abdalla and Sanjai Tiwari, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p269-276.

Computer Analysis Helps Lower Cost, CE Nov. 92, p87.
Computer Modeling of Structural Systems for Residential Scale Buildings, Richard A. Ebelioft, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p58-65.

Concept Evaluation Methodology for Extraterrestrial Ha-bitats, Richard M. Drake and Philip J. Richter, AS July 92, p282-296.

Confinement Steel Requirements for Connections in Ductile Frames, M. R. Ehsani and J. K. Wight, ST Mar. 90, p751-767.

Construction of Pressurized, Self-Supporting Membrane Structure on Moon, Philip Y. Chow, AS July 92, p274-281.

Design Aids for Reinforced Concrete Columns, Bao-Jun Sun and Zhi-Tao Lu, ST Nov. 92, p2986-2995.

Sun and Zun and Day 31 Nov. 72, part 2009.

Design Codes for Lunar Structures, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1-12.

Russell J. Miller, ed., 1992), pJ-12.
Design Loads for Sloshing in TLP Pontoons Tanks,
Stephen W. Balint, (Civil Engineering in the Oceans V,
Robert T. Hudspeth, ed., 1992), p99-113.
Design of Oak Point Link Railroad Trestle, Eugene
Pollner and Kim Plumacher, (Computing in Civil Engineering and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p802-809.
Design of Tension Leg Platforms: A Knowledge Based
Approach, John M. Niedzwecki and Oriol R. Rijken,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p288-293.
A Design Product Model for Computer Integrated Struc-

A Design Product Model for Computer Integrated Struc-tural Engineering, Jerome Madden and Richard Sause, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p113-120.

Discrete Optimization of Structures Using Genetic Algorithms, S. Rajeev and C. S. Krishnamoorthy, ST May 92, p1233-1250.

Distortional Buckling Solutions for Continuous Composite Beams, Mark Andrew Bradford and Zhi Gao, ST Jan. 92, p73-89.

Electronic Spreadsheets in Structural Design, David O. Knuttunen, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pi187-1194.

Engineering a Monument, Evoking a Nightmare, Leo Argiris, Khosrow Namdar and Trevor Adams, CE Feb. 92, p48-51.

giris, Khosrow Namdar and Trevor Adams, CE Feb. 92, p48-51.

Externalizing Project-Specific Knowledge in Structural Design, Taufig Rafiq and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p386-397.

Floating Fabric Over Georgia Dome, Matthys Levy, CE Nov. 91, p34-37.

Framework for Evaluation of Lunar Base Structural Concepts, Haym Benaroya and Mohammed Ettouney, AS Apr. 92, p187-198.

Girders Separate Tunnel from New Milwaukee Jail, CE Dec. 92, p22.

Glueware, Brian Brenner and Cynthia Gagnon, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1220-1225.

Homogeneous Structures Subjected to Repeated Structural System Changes, Luigino Dezi, Giovanni Menditto and Angelo Marcello Tarantino, EM Aug. 90, p1723-1732.

1732

1732.
Indigenous Resource Utilization in Design of Advanced Lunar Facility, Larry S. Bell, Michael G. Fahey, Todd K. Wise and Paul C. Spana, AS Apr. 92, p230-247.
An Integrated Representation of Form, Function and Behavior in Structural Engineering, D. H. Douglas Phan, Jamal A. Abdalla and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p394-401.
Intelligent Objects for Synthesis of Structural Systems, Dionysis R. Rigopoulos and Irving J. Oppenheim, CP July 92, p266-281.
Knowledge-Based Systems in Structural Engineering in

Dionysis R. Rigopoulos and Irving J. Oppenheim, CP July 92, p266-281.

Knowledge-Based Systems in Structural Engineering in Germany, Nikolaus Fleischmann and Martina Schnellenbach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p558-565.

Markov Decision Processes in Structural Optimization, Zongwei Tao, J. Hugh Ellis and Ross B. Corotis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-542.

Mechanical Equipment Requirements for Inflatable Lunar Structures, James M. Hines, Craig E. Miller and Richard M. Drake, AS Apr. 92, p248-256.

Minimum Weight Design of Structural Topologies, U. Kirsch and B. H. V. Topping, ST July 92, p1770-1785.

Object-Oriented Approaches for Integrated Engineering Design Systems, Richard Sause, Kirk Martini and Graham H. Powell, CP July 92, p248-255.

On Knowledge Representation and Knowledge Acquisition in Structural Engineering, Nikolaus Fleischmann and Adam Borkowski, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p402-409.

Online Design Codes: An Integrated Approach, S. Malasia J. C. Oldbewsell. V. Lie (Computing in Civil Engineering in Civil Engineering Line Periodering in Civil Engineering in Civil Engineering Civil Engineering Line Periodering in Civil Engineering Line Periodering Line Periodering in Civil Engineering Line Periodering in Civil Engineering Line Periodering in Civil Engineering Line Periodering Line Periodering Civil Engineering Line Periodering Line Periodering Line Periodering Line Periodering Line Periodering Li

Online Design Codes: An Integrated Approach, S. Malas-ri, J. C. Olabe and L. Y. Lin, (Computing in Civil Eng-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p285-292.

Peaches and Concrete, Housh Rahimzadeh and Mark B. Haselton, CE Feb. 92, p42-44. Plane Frame Optimum Design Environment Based on Genetic Algorithm, W. M. Jenkins, ST Nov. 92, p3103-3112.

p3103-311Z.

Proposal for Structural Design Peer Review, Rubin M. Zallen, CF Nov. 90, p208-215.

QLRS: An Approach for Qualitative Interpretation of Lateral Load Resisting Systems, Renate Fruchter and Helmut Krawinkler, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p233-260.

Qualitative Evaluation of Preliminan Symposium,

p.23-200. ualitative Evaluation of Preliminary Structural Designs, Luis M. Bozzo and Gregory L. Fenves, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.89-96.

eu., 1992), p89-90. Reliability Analysis of Lunar Structures Under Meteoroid Impact, William M. Bulleit and Eric P. Steinberg, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p9-12. Safer Truss-Type Structures is UConn Researcher's Aim, NE Feb. 92, p16.

Sequential Versus Distributed Constraint-Based Approach to Structural Design Automation: A Comparative Study, Sivand Lakmazaheri, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p261-268.

Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p261-268.

Space-Based Assembly Sequence Formulation for Evaluation of Large Orbital Assemblies, Steve Jolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1530-1541.

Stochastic Critical Excitations, Mukund Srinivasan, Ross Corotis and Bruce Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391.

Structural Considerations in the Design of a Mars Mission Aerobrake, John Hairr and Eric Klang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p373-884.

Structural Design Methodology of Large Space Structures, Ralph J. Dornsile, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1022-1034.

Structural Design of the GN&C Navigation Base for the Space Station Freedom, Lavonia Grant and Fred Cutting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p399-849.

Structural System Design under Uncertainty Via Pareto Optimization, Dan M. Frangopol and Minoru lizuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p515-554.

Technical Issues for Lunar Base Structures, Brent Sherwood and Larry Toups, AS Apr. 92, p175-186.

Tensile-Integrity Structural Concepts for the Lunar Surface, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p526-283.

Ultimate Air Rights, Jeffrey Smilow, CE Nov. 91, p38-41.

Structural dynamics
Correction Criteria of Finite Element Modeling in Struc-tural Dynamics, M. Tong, Z. Liang and G. C. Lee, EM Apr. 92, p663-682.

Frequency Domain Analysis of Undamped Systems, Eduardo Kausel and Jose M. Roësset, EM Apr. 92, p721-734.

p721-734. Improved Time-History Analysis for Structural Dynamics Calculations, C. -C. Chen and A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p449-452.
Modal Coupling Effect of Non-Classically Damping, X. Va and T. Igusa, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p453-455.

456

456.
Modal Synthesis Method for General Dynamic Systems, L. E. Suarez and M. P. Singh, EM July 92, p1488-1503.
No More Newtons (Itr), J. F. Polma, CE Nov. 92, p36.
Nonstationary Response of Structures with Closely Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.
Parameter Estimations of Structural Dynamic Systems, C-B. Yun, C-G. Lee and H.-J. Lee, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p212-215.
Recorded Seismic Response of Pacific Park Plaza. II: System Identification, E. Şafak and M. Çelebi, ST June 92, p1566-1589.

p1566-1589.

pp1566-1589.

Responses of Nonlinear Oscillators Excited by Non-Gaussian Pulse Processes, Sau-Lon James Hu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), pl44-147.

Seismic-Energy Dissipation in MDOF Structures, Pierre Léger and Serge Dussault, ST May 22, pl251-1269.

Vibration of a Bridge Under a Random Train of Moving Loads, M. Di Paola and G. Ricciardi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), pl36-139.

Vibration of Pedestrian Overpass, Tso-Chien Pan, CF Feb. 92, p34-45.

Structural elements
Bargain Package for Smaller Structures, David Angelotti,
CC July 92, p1-9.

Design and Technology Assessment of Three Lunar Habi-tat Concepts, Warren D. Hypes, Robert L. Wright and Marston J. Gould, Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p249-259.

Experiences with Experimental Design Schemes for Failure Surface Estimation and Reliability. S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., tural and Geote 1992), p252-255.

Fatigue/Fracture Reliability and Maintainability of Struc-tural Systems: A Method of Analysis, C. J. Kung and P. H. Wirsching, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992). p436-439

On a Procedure to Estimate the Reliability of Mechanical Components, G. I. Schweller, C. G. Bucher and H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p451-454.

Plates on Elastic Foundation, David S. Chilton and Jerzy W. Wekezer, ST Nov. 90, p3236-3241.

Qualitative Evaluation of Preliminary Structural Designs, Luis M. Bozzo and Gregory L. Fenves, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p89-96.

Residual Strength of Structural Components Subjected to Cyclic Loads, Deric John Oehlers, ST Oct. 92, p2645-2658.

Response of Reinforced Concrete Elements to Severe Impulsive Loads, T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079.

A Statistical Method for the Reliability of Mechanical Components, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p440-442.

Structural engineering
Analysis of Buildings Using Strain-Based Element with
Rotational DOFs, A. K. H. Kwan, ST May 92, p1191-

Communication Protocol in Structural Design Objects, Jamal A. Abdalla and Sanjai Tiwari, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p269-276.

A Design Product Model for Computer Integrated Struc-tural Engineering, Jerome Madden and Richard Sause, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl 13-120.

Estimates of Extreme Wind Distribution Tails, J. A. Lechner, S. D. Leigh and E. Simiu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p276-279.

Finite Element Analysis and Design of Bridges in a Distributed Computing Environment, C. A. Hudson and M. A. Austin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p671-678.

Fixed-End Moments and Thrusts of Planar Curved Beams, Tung-Ming Wang and Theodore F. Merrill, ST Jan. 92, p324-331.

Jan. 72, p.24-331.
An Integrated Representation of Form, Function and Behavior in Structural Engineering, D. H. Douglas Phan, Jamal A. Abdalla and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p394-401.

60., 1972), p. 27-701.
Knowledge-Based Systems in Structural Engineering in Germany, Nikolaus Fleischmann and Martina Schnellenbach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p558-565.

A Lisp Based Expert System Tool, K. M. Sakr and M. U. Hosain, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p888-895.

On Knowledge Representation and Knowledge Acquisi-tion in Structural Engineering, Nikolaus Fleischmann and Adam Borkowski, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p402-409.

Online Design Codes: An Integrated Approach, S. Malasri, J. C. Olabe and L. Y. Lin, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p283-292.
Primitive-Composite Approach for Structural Data Modeling, H. Craig Howard, Jamal A. Abdalla and D. H.
Douglas Phan, CP Jan, 92, p19-40.
Spatial and Temporal Aspects of Qualitative Structural
Reasoning, David I. Schwartz and Stuart S. Chen,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p277-284.
Standardizing Seismic Rehab, CE Sept. 92, p11.
Study Looks to the Past to Change the Future, CE Feb.
92, p23.

92, p23.
720. Two Basic Concepts in Offshore Engineering, Guillermo D. Hahn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p188-191.

Structural failures
Comments on L'Ambiance Plaza Lifting Collar/
Shearheads, William McGuire, CF May 92, p78-85.
L'Ambiance Plaza: What Have We Learned, Virginia Fairweather, CE Feb. 92, p38-41.
Manufactured Wood Joists—Noncollapse Failure, Theodore G, Padgett, Jr., CF Feb. 92, p38-64.
Public-Safety Issues in Collapse of L'Ambiance Plaza, Frank J. Heger, CF May 91, p92-112.
Reliability Analysis of Truss Structures with Multistate Elements. II, A. Karamchandani and C. A. Cornell, ST Apr. 92, p910-925.
Research Needs Related to Forensic Engineering of Constructed Facilities, Julie Mark Cohen, W. Gene Corley, Ping K. Wong and John M. Hanson, CF Feb. 92, p3-11.
Response of Space Structures Under Sudden Local Damage, Ramesh B. Malla and Baihai Wang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p909-920.
Settlement, Structural Failure, and In-place Repair of

Settlement, Structural Failure, and In-place Repair of Above Ground Storage Tanks, Richard M. Berry and Robert P. Buhrow, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p240-251.

structural materials

Structural materials
Masonry as a Structural Material, Daniel P. Abrams,
(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), pl 16-129.
Structural Materials from Lunar Simulants Through
Thermal Liquefaction, Chandra S. Desai and Kirsten
Girdner, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p528-536.

Structural members
Behavior of Partially Grout-Filled Damaged Tubular
Members, S. Parsanejad and P. Gusheh, ST Nov. 92,
p3053-3066.

p.9u.32-3u00.

Buckling Analysis of Structures Composed of Tapered Members, Siu Lai Chan, ST July 90, p1893-1906.

Compendium of Design Office Problems, Committee on Design of Steel Building Structures of the Committee on Metals, Structural Division, ST Dec. 92, p3444-3463.

on Metals, Structural Division, S1 Dec. 92, p3444-3463.
Crack Analysis of Reinforced Concrete Tension Members, H. C. Chan, Y. K. Cheung and Y. P. Huang, ST Aug, 92, p2118-2132.
Direct Analysis of Prestressed Concrete Members, A. S. Prasada Rao, ST Dec. 90, p3432-3447.
Dynamic Response Characteristics of Jack-Up Drilling Units, David T. McDonald and Robert G. Bea, (Civil Engineering in the Occars V, Robert T. Hudspeth, ed., 1992), p906-920.
Geometric Modeling of Inflatable Structures for Lunar Base, Paul S. Nowak, Willy Z. Sadeh and Loretta A. Morroni, AS July 92, p311-322.
Inelastic Response of Variable Stiffness Members under Cyclic Loading, Demeter G. Fertis and Chin T. Lee, EM July 92, p1406-1422.
Method for Simulating Tension Performance of Lumber Members, Steven M. Cramer and William B. Fohrell, ST Oct. 90, p2729-2746.
Minimum Weight Design of Structural Topologies, U. Kirsch and B. H. V. Topping, ST July 92, p1770-1785.
Moisture Content and Reliability-Based Design for Wood Members, David V. Rosowsky and Kenneth J. Fridley, ST Dec. 92, p3466-3472.

Nonlinear Stability Analysis of Steel Members by Finite Element Method, Zuyan Shen and Qilin Zhang, EM Mar. 92, p445-461.
Probability of Wave Force on Horizontal Members, Laurence Z. H. Chuang and C. C. Tung, (Clvil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p467-480.
Residual Stresses in Cold-Formed Steel Members, C. C. Weng and Teoman Pekoz, ST June 90, p1611-1625.
Schifflerized Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1920-1936.
Service Load Behavior of Concrete Members Prestressed with Unbonded Tendons, M. H. Harajii and M. Y. Kanj, ST Sept. 92, p2569-2589.
Stitch Spacing and End Fixity in Seismic-Resistant Boxed Angle Braces, Farhang Aslani and Subhash C. Goel, ST Oct. 92, p2872-2889.
Wave Slamming on a Horizontal Circular Cylinder, Mi-

Wave Slamming on a Horizontal Circular Cylinder, Mi-chael Isaacson and Sundar Prasad, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992),

Structural models
QLRS: An Approach for Qualitative Interpretation of
Lateral Load Resisting Systems, Renate Fruchter and
Helmut Krawinkler, (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992),
p253-260.

p253-260. Structural Design Methodology of Large Space Structures, Ralph J. Dornsife, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1022-1034. Updating Dynamic Models and Their Associated Uncertainties for Structural Systems, J. L. Beck and L. S. Katafygiotis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p681-684. Updating of Dynamic Structural Systems by Learning, Massaru Hoshiya, Yasuyoshi Obuchi and Shigeru Noda, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p124-127.

Structural plastics Adhesives and Structural Plastics, Robert B. Austin, (Ma-terials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571.

Structural reliability
Assessing Time-Variant Bridge Reliability Due to Pier Scour, Peggy A. Johnson and Bilal M. Ayyub, HY June 92, p887-903.

92, p887-903.

Bridge Overloading Criteria, Michel Ghosn, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p575-578.

Calibration of Redundancy Factors for Highway Bridges, Michel Ghosn and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p344-347.

Comparison of Some Importance Sampling Techniques in Structural Reliability, S. Engelund and R. Rackwitz, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p108-111.

Condition Monitoring of Structures Using Transient Response, George Hearn, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p127-138.

Conditional and Joint Failure Surface Crossing of Stochastic Processes, Øistein Hagen, EM Sept. 92, p1814-1839.

1839.

A Criticism of Statistical Methods in Probabilistic Models in Structural Reliability, Karl Breitung, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.326-239.

Dynamic Response of Uncertain Two-Dimensional Structures, C. G. Bucher and C. E. Brenner, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.132-135.

Effect of Active Control to Structural Reliability, J. T. P. Yao and H. G. Natke, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.373-376.

Evaluation of System-Reliability Methods for Cables

Evaluation of System-Reliability Methods for Cable-Stayed Bridge Design, Michel Bruneau, ST Apr. 92, p1106-1120.

Fatigue Reliability Model for Railway Bridges, A. Ebrahimpour, E. A. Maragakis and S. Ismail, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p320-323.

First Order Importance Sampling Method and its Variance Reduction, Gongkang Fu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p568-571.

First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p531-534.

High Order Statistics in Structural Reliability, A. M. Hasofer, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p244-

nearisation and Offshore Fatigue Reliability, R. E. Melchers and M. Ahammed, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p5-8.

and-Space Formulation for Time-Dependent Structural Reliability, R. E. Melchers, EM May 92, p853-870.

Reliability, R. E. Melchers, EM May 92, p853-870.

Markov Decision Processes in Structural Optimization, Zongwei Tao, J. Hugh Ellis and Ross B. Corotis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-542.

The Mother of All Resilient Structures: Fixed-Base Tower in 3000-Foot Water and Some Outstanding Issues, Peter W. Marshall, Susan L. Smolinski and Denby G. Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p258-272.

Probabilistic Analysis of Post-Tensioned Steel Girder Bridges, Sami W. Tabsh and Jack R. Kayser, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p13-16.

Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, 0-87262-873-6, 614pp. Probabilistic Stability Analysis for Deep-Water Founda-tion, Knut O. Ronold and Steinar Bysveen, GT Mar. 92, p394-405.

Reliability Analysis of Lunar Structures Under Meteoroid Impact, William M. Bulleit and Eric P. Steinberg, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p9-12.

Reliability Analysis of Truss Structures with Multistate Elements. II, A. Karamchandani and C. A. Cornell, ST Apr. 92, p910-925.

Reliability of Geometrically Nonlinear PR Frames, Achintya Haldar and Yiguang Zhou, EM Oct. 92, p2148-2155.

Reliability of Portal Frames With Interacting Stress Re-sultants, Luis Miguel da Cruz Simões, ST Dec. 90, p3475-3496.

p3475-3496.
Reliability-Based Optimization Using Sequential Quadratic Programming, Sankaran Mahadevan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p543-546.
Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, R. H. Sues and L. A. Twisdale, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p511-514. p511-514.

Re-Qualification of Offshore Platforms, R. G. Bea, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p427-443.

Response Variability of Structures Subjected to Bifurca-tion Buckling, G. V. Palassopoulos, EM June 92, p1164-1183.

Review of NPP Concrete Degradation Factors and Assessment Methods, T. M. Refai and M. K. Lim, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p182-193.

Risk Based Structural Optimization, Palle Thoft-Christensen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Sampling Techniques for Time-Variant Reliability Problems, R. E. Melchers, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p100-103.

A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, H. J. Pradlwarter, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p69-72.

Sensitivity Evaluation of Simulation Methods for Relia-bility Assessment, Bilal M. Ayyub and Chao-Yi Chia, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p240-243.

Space-Based Assembly Sequence Formulation for Evalua-tion of Large Orbital Assemblies, Steve Jolly, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1530-1541. Stochastic FEM-Based Validation of LRED Sadespa

Stochastic FEM-Based Validation of LRFD, Sankaran Mahadevan and Achintya Haldar, ST May 91, p1393-

1412

Stochastic Finite Elements and Reliability Analysis, Lucia Faravelli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p45-48.

and Geotechnical Reliability, Y. K. Lin, ed., 1992), p45-48.

Structural Reliability Analysis Methods for Implicit Performance Functions, Y.-I. Wu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p483-486.

Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, Julio E. Pulido, Timothy L. Jacobs and Edison C. P. Lima, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p507-510.

Structural Reliability and Proof Testing for Highway Bridges, Gongkang Fu and Jianguo Tang, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p348-351.

Structural Reliability of Seismic Isolation System, Kazuta Hirata, Kenji Shirahama and Takahiro Somaki, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p57-60.

Systems Reliability Approach to Fatigue of Structures, A. Karamchandani, J. I. Dalane and P. Bjerager, ST Mar. 92, p684-700.

72, po84-700.
Tensile-Integrity Structural Concepts for the Lunar Surface, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p276-283.

Time-Variant System Reliability Analysis Using Response Surface Methodology and Fast Integration, Timothy H.-J. Yao and Y. K. Wen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530.

A. Unified Simulation Approach to Structural System Reliability Analysis, Richard C. Turner and Michael J. Baker, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p104-107.

Use of Importance Sampling Constraints in System Optimization, Yingwei Liu and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p112-115.

Structural re

Structural response
Assismic Hybrid Control of Nonlinear and Hysteretic
Structures II, J. N. Yang, Z. Li, A. Danielians and S. C.
Liu, EM July 92, p1441-1456.
Comparison of Wind Cross-Spectral Data with Models,
N. P. Jones, A. Jain and R. H. Scanlan, (Probabilistic
Mechanics and Structural and Geotechnical Reliability,
Y. K. Lin, ed., 1992), p288-291.
Digital Simulation of Wind Load Effects, Ahsan Kareem
and Yousun Li, (Probabilistic Mechanics and Structural
and Geotechnical Reliability, Y. K. Lin, ed., 1992),
p284-287.

p284-287

Event-to-Event Strategy for Nonlinear Analysis of Truss Structures. I, A. Karamchandani and C. A. Cornell, ST Apr. 92, p895-909.

Apr. 92, p895-909.

Finite Element Dynamic Reliability Analysis with Condensation, Sankaran Mahadevan and Sandeep Mehta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, V. K. Lin, ed., 1992), p332-335.

Interactive Base-Isolation Foundation System: I. Finite Element Formulation, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2048-2058.

Interactive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.

Oct. 92, p.2039-2071.

Modal Analysis of Vibration Response for Condition Monitoring of Structures, George Hearn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p940-943.

Modal Synthesis Method for General Dynamic Systems, L. E. Suarez and M. P. Singh, EM July 92, p1488-1503.

Mutual Residual Energy Method for Parameter Estimation in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, ST Jan. 92, p223-242.

On a Procedure to Estimate the Reliability of Mechanical Components, G. I. Schuëller, C. G. Bucher and H. J. Pradiwarter, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p451-454.

p451-454.
On the Approximated Solution of Non-Linear Systems
Under Non Gaussian Excitations, G. Falsone and M.
Vasta, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p140-143.
One-Dimensional Model for Analysis of CRC Paverent
Growth, Dapeng Xin, Dan G. Zollinger and Ray W.
James, TE July/Aug. 92, p557-575.
Pre-Test Selection of Static Force and Displacement
Measurement Locations for Damage Assessment,
Masoud Sanayei, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p567-570. tural and Geote 1992), p567-570.

Probabilistic Order of Chaotic Dynamics, A. H.-D. Cheng, C. Y. Yang and K. Hackl, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p420-423.

Probability Model of Load Exceedances under Cyclic Loadings, Karen C. Chou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p208-211.

1992), p.208-211.
Random Response of Multicrystalline Structures, Dariush Mirfendereski and Armen Der Kiureghian, Enginering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p800-803.
Recorded Seismic Response of Pacific Park Plaza. II: System Identification, E. Şafak and M. Çelebi, ST June 92,

p1566-1589

seponse of Mono-Coupled Distributed Parameter Sys-tems to Random Excitation, D. M. McFarland, L. A. Bergman and G. G. G. Lueschen, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki,

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), p576-579.

Response of Secondary Systems to Short Duration Stochastic Input, R. Sinha and T. Igusa, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p447-450.

Response Statistics of Tension Leg Platforms Under Wind Loads, Jun Zhao and Ahsan Kareem, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p921-933.

Response Variability of Structures Subjected to Bifurca-tion Buckling, G. V. Palassopoulos, EM June 92, p1164-1183.

p1164-1183.

Soil/Structure Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p396-399.

Structural Performance of Hardwood-Metal Composite Beams, Robert H. Kim and Jai B. Kim, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p718-731.

Temperature Dependent Bridge Movements, Shashi Moorty and Charles W. Roeder, ST Apr. 92, p1090-1105.

Wavelet Transform Analysis of Several Transient or Non-stationary Phenomena in Engineering Mechanics, James T. Kirby, Michael J. Chajes and Jeffrey A. Mel-by, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p204-207.
Wind Effect on Bras-Joshed Structures, Vu. Chan, and

Wind Effects on Base-Isolated Structures, Yu Chen and Goodarz Ahmadi, EM Aug. 92, p1708-1727.

Structural safety

Design Considerations for Using Adhesives in Shear Walls, J. D. Dolan and M. W. White, ST Dec. 92, p3473-3479.

p331-3-349.

Final Design and Construction of Gibraltar Dam Strengthening, Noel C. Wong, Theodore B. Feldsher, Robert S. Wright and David H. Johnson, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p440-48.

Pre-Envelope Covariance Differential Equations, G. Muscolino, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p180-183.

183. Probabilistic Evaluation of Redundancy of Bridge Structures, Robert W. Kritzler and Jamshid Mohammadi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p156-159. Public-Safety Issues in Collapse of L'Ambiance Plaza, Frank J. Heger, CF May 91, p92-112.

Replacement of a Deteriorated Steel Sheet Pile Bulkhead, Vincent G. Miller and Vladimir Ostrov, (Ports '92, David Torseth, ed., 1992), p826-835. Review of NPP Concrete Degradation Factors and As-sessment Methods, T. M. Refai and M. K. Lim, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p182-193.

p182-193.
ismic Design of Viscoelastic Dampers for Structural Applications, Ri-Hui Zhang and T. T. Soong, ST May 92, p1375-1392.

92, p1375-1392.

92, p1375-1392.

Soil/Structures, Rita Robison, CE Nov. 92, p66-68.

Soil/Structures Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p396-399.

Structural Reliability and Proof Testing for Highway Bridges, Gongkang Fu and Jianguo Tang, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p348-351.

Taming Tornado Alley, Harold W. Harris, Kishor C. Mehta and James R. McDonald, CE June 92, p77-78.

Structural settlement
Loss of Ground During CFA Pile Installation in Inner
Urban Areas, Jacek K. Leznicki, Melvin I. Esrig and
Robert G. Gaibrois, GT June 92, p947-950.
Minipile Milestone in Memphis, Loren D. Flick, A. E.
"Ted" Graham, Michael J. Marasa, Nigel B. R. Osborn
and Frank T. Tobey, III., CE Sept. 92, p46-49.
Swimming Pools Supported by Dissimilar Bearing Strata,
G. S. Kovacs, CF May 92, p118-120.

G. S. Kovacs, CF May 92, p118-120.

Structural stability

Analysis of Stability of L'Ambiance Plaza Lift-Slab Towers, Piotr D. Moncarz, Roy Hooley, John D. Osteraas and Brant J. Lahnert, CF Nov. 92, p232-245.

Comments on L'Ambiance Plaza Lifting Collar/
Shearheads, William McGuire, CF May 92, p78-85.

Experimental Research on Groyne Stability Under Very Oblique Wave Action, Antonio Baonza and José M. Berenguer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p718-732.

Instability of Buildings Subjected to Earthquakes, Dionisio Bernal, ST Aug. 92, p2239-2260.

Minipile Milestone in Memphis, Loren D. Flick, A. E. "Ted" Graham, Michael J. Marasa, Nigel B. R. Osborn and Frank T. Tobey, Ill., CE Sept. 92, p46-49.

Optimal Design of Structures with Kinematic Nonlinear Behavior, S. Pezeshk, EM Apr. 92, p702-720.

Sandbridge Virginia Oceanfront Seawall Arbitration Hearing: Some Lessons Learned for Coastal Engineers, David R. Basco, Robert A. Dolan and Carter Sinclair, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1003-1020.

Structural steels
Corrosion Fatigue of Deepwater Offshore Materials, Gordon F. Fowkes and Harris L. Marcus, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.

Locally Buckled Plastic Hinge Behavior Under Monoton-ic and Cyclic Loading Condition, Eun-Taik Lee and G. C. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1047-1050.

and John M. Niedzwecki, ed., 1992), p1047-1050. Structural streagth Application of a Dolos Structural Design Procedure, Jeffrey A. Melby, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p830-846. Design Live Loads for Coherent Crowd Harmonic Movements, A. Ebrahimpour and R. L. Sack, ST Apr. 92, p1121-1136. A New Concrete Armor Unit for Breakwaters: The "Beta Block", José María Berenguer, Vicente S. Naverca and José Manuel de la Peña, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p667-678. Taming Tornado Alley, Harold W, Harris, Kishor C. Mehta and James R. McDonald, CE June 92, p77-78.

Mehta and James R. McDonald, CE June 92, p77-78. Structure reinforcement

Al Supported Process Planning for Automated Rebar Fabrication, Md. Salim and Leonhard E. Bernold, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p872-879.

Bond Strength of Straight GFRP Rebars, S. Tao, M. R. Ehsani and H. Saadatmanesh, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p598-605.

Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchors, O. Chaallal and B. Benmokrane, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p606-617.

Hybrid (FRP-Steel) Reinforcement for Concrete Structures, Antonio Nanni, Tadashi Okamoto, Masaharu Tanigaki and Markus J. Henneke, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p655-665.

Nonlinear Cyclic Behavior of Reinforcing Bars Including Buckling, Giorgio Monti and Camillo Nuti, ST Dec. 92, p3268-3284.

Splice/Development Length Requirements for FRP Gride.

92. p3268-3284.
Splice/Development Length Requirements for FRP Grids Used in the Structural Reinforcement of Concrete, Edwin R. Schmeckpeper and Charles H. Goodspeed, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p632-644.
Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.
Trial Nearing in Controversial Epoxy-Coated Rebar Case, CE Aug. 92, p12-13.

Structures
Actively Controlled P-F Based Sliding Structures, Sohail
M. Qureshi, Kiyoshi Uno and Hajime Tsutsumi, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p324-327.
Arc-Length Method for Passing Limit Points in Structural
Calculation, W. F. Lam and C. T. Morley, ST Jan. 92,

p169-185.

p103-103.
Assismic Hybrid Control of Nonlinear and Hysteretic Structures I, J. N. Yang, Z. Li, A. Danielians and S. C. Liu, EM July 92, p1423-1440.
Combined Symbolic-Numeric Explosion Damage Assessment for Structures, Theodor Krauthammer, Raman Murailidharan and Walter Schmidt, CP Oct. 92, p417-

434.
Constructing Radiation Shields with Textiles for Lunar Applications, J. Lewis Dorrity and James W. Brazell, Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-377.
Control of Hysteretic System Using Velocity and Acceleration Feedbacks, J. N. Yang, Z. Li and S. C. Liu, EM. Nov. 92, p2227-2245.
Critical Review of Thin-Plate Stability. Equations. John

Critical Review of Thin-Plate Stability Equations, John Platt, Gwynne Davies and Cyril Snell, EM Mar. 92, p481-495.

p481-495.
The Design of a Permanent Lunar Research Station, James R. Thomas, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212.
Distributed Failure Analysis, Fallacies and Remedies, Kaspar Willam, Andreas Dietsche, Guillermo Etse and Paul Steinmann, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p772-775.

Exact Nonstationary Response of a Sliding Rigid Structure to a Modulated White Noise Base Excitation, Mare P. Mignolet and Guangwuu W. Fan, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p408-411.

Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p120-1261.

Failure Analysis of Masonry Structures, P. B. Shing, H. R. Lotfi, A. Barzegarmehrabi and J. Brunner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p780-783.

Framework for Evaluation of Lunar Base Structural Concepts, Haym Benaroya and Mohammed Ettouney, AS Apr. 92, p187-198.

Frequency Response of Disordered Periodic Structures, G. Q. Cai and Y. K. Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p796-799.

Hedralecture in Severe Climates, Joseph J. Mangan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p796-799.

Hedratecture in Severe Climates, Joseph J. Mangan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p159-170.

Irrigation, Drainage, and Landscaping for Expansive Soil, Robert W. Day, IR Mar./Apr. 92, p285-290.

Mutual Residual Energy Method for Parameter Estima-tion in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, ST Jan. 92, p223-242.

Neural Networks Based Damage Detection in Structures, Zbigniew P. Szewczyk and Prabhat Hajela, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1163-1170.

Monlinear Analysis of Strain-Softening Damage under Monotonic and Cyclic Loading, Zdeněk P. Bažant, Joško Ožbolt and Rolf Eligehausen, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p490-493.

Normalizing Inelastic Seismic Response of Structures Having Eccentricities in Plan, Michel Bruneau and Stephen A. Mahin, ST Dec. 90, p3358-3379.

Probabilistic Characteristics of a Sliding Structure Via New Stochastic Linearization Methods, Ruichong Zhang, Isaac Elishakoff and Masanobu Shinozuka, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, V. K. Lin, ed., 1992), p196-199.

Random Vibration of the Viscoelastic Structure under Series of Stochastic Excitations, Pawel Sniady and Stanislaw Zukowski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), al and Ge p152-155.

Stable Controllers for Instantaneous Optimal Control, J. N. Yang, Z. Li and S. C. Liu, EM Aug. 92, p1612-1630.

Stochastic Dynamics of Hysteretic Systems, L. a Faravelli and Paolo Venini, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p53-56.

Structural Fire Protection (M&R No. 78), ASCE Committee on Fire Protection, Structural Division, American Society of Civil Engineers, (E. L. Schaffer, chmn.), 1992, 0-87262-888-4, 260pp.

Support Structures for High-Resolution Optical Systems, Ralph M. Richard and Daniel Vukobratovich, AS Jan. 92, p24-43.

Thermal Stresses in Bi-Coated Structures, Mauro Ferrari and Luca Lutterotti, EM Sept. 92, p1928-1938.

Deep Cuts and Ground Movements in Chicago Clay, Richard J. Finno, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143.

Schiffleriad Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1920-1936.

Modified Stub-Girder Floor System: Full-Scale Tests, M. Ahmad, E. Y. L. Chien and M. U. Hosain, ST Nov. 92, p3222-3236.

Civil Engineering Education in Ecuador, Oswald Ren-don-Herrero and Joseph H. Sherrard, El Oct. 92, p415-419

A Construction All-Nighter, CE Mar. 92, p8.

A Department's Perspective on Computer Education, Rafael G. Quimpo and Joel I. Abrams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p73-80.

Su., 1774), p13-80.
Environment for Educational Use of Professional Engineering Software, Richard Sause, John L. Wilson, Mark Tamaro and Brenda Wildrick, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p214-221.

A Pilot Sounding Rocket Project Utilizing Student Labor, Sue A. Johnson, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2317-2327.

Space Exposed Experiment Developed for Students, Doris K. Grigsby and Bob Melton, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2161-2171.

Strategies to Stem Declining Engineering Enrollments, Jack D. Bakos, Jr., El July 92, p250-257. Technical Personnel Shortages in Construction Industry, Russel C. Jones, El Jan. 90, p16-26.

Using a Lunar Base Scenario Context in Business Educa-tion, Cathleen S. Burns and Sherry K. Mills, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2172-2187.

17724, p4112-1181.
Using Simulation Software to Build Conceptual Models in Civil Engineering, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244.

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Slab Behavior in Composite Beams at Openings. I: Analysis, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p2287-2303.

32, p.20 (2.30)
Siab Behavior in Composite Beams at Openings. II: Tests and Verification, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p.2304-2322.
Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.

Cyclic Behavior of Extended End-Plate Joints, Ahmed Ghobarah, Robert M. Korol and Ashraf Osman, ST May 92, p1333-1353.

## ubcritical flow

Design of Trapezoidal Expansive Transitions, Prabhata K. Swamee and Bharat C. Basak, IR Jan./Feb. 92, p61-

Evaluation of Supercritical/Subcritical Flows in High-Gradient Channel, Douglas J. Trieste, HY Aug. 92, p1107-1118.

## ibgrades

Eccentrically Loaded Plates on Reinforced Subgrades, Vito A. Guido and John J. Nocera, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1116-

Finite Element Simulation of Behavior of Laterally Load-ed Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284.

Iren. 74, p.240-264.
Installation and Monitoring of Thermal Conductivity Suction Sensors in a Fine-Grained Subgrade Soil Subjected to Seasonal Frost, Walaa E. I. Khogali, Kenneth O. Anderson, Julian K. Gan and Delwyn G. Fredlund, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p153-167.

Pressuremeter and MDD Moduli for Road Design, P. J. Sanders, (Road and Airport Pavement Response Moni-toring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p367-381.

Eation, ed., 1992), p.367-381. Rigid-Pavement Evaluation Using NDT—Case Study, Jacob Uzan, TE July/Aug. 92, p527-539. Soft Clay Subgrade Stabilization Using Geocells, S. Y. Mhaiskar and J. N. Mandal, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1092-1103.

Rome Waste Materials in Road Construction, Salem D. Ramaswamy and Mohammed A. Aziz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p153-165.

Subirrigation
Aldicarb Transport in the Coastal Plain of N. C. C. L. Munster, R. W. Skaggs, J. E. Parsons, R. O. Evans, J. W. Gilliam and E. W. Harmsen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424.

ET from Shallow Groundwater Maintained by Con-trolled-Drainage/Subirrigation System, James L. Fouss and James S. Rogers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p594.

# marine pipelines

Such Propagation in Submarine Pipelines, G. D. Hahn, M. She and J. F. Carney, III., EM Nov. 92, p2191-2206. Effect of Spoilers on Scour at Submarine Pipelines, Yee-Meng Chiew, HY Sept. 92, p1311-1317. Elastic Analysis of Submarine Pipelines, Poon-Hwei Chuang and David Lloyd Smith, ST Jan. 92, p90-107.

Chuang and David Loyoy Smith, S. 1 Jan. -2, pp.0-107.

A Fourier Series Solution to Bottom Roughness Induced Stresses During Pipe Laying, Naum Kershenbaum, J. T. Powers and Donald Chang. (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p1006-1035.

Pipeline Storm Behavior on Clay Soils, Derek V. Morris, Tony S. Yen, Wayne A. Dunlap and James R. Hale, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p560-570. Reliable Design-Wave Force Predictions for Seaded Pipe-lines, Robert A. Grace, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p481-495.

Submerged flow Sluice-Gate Discharge Equations, Prabhata K. Swamee, IR Jan/Feb. 92, p56-60.

Submerged vanes
Sediment Management with Submerged Vanes. II: Applications, A. Jacob Odgaard and Yalin Wang, HY Mar.
91, p284-302.

Submerging
Armor Stability on Submerged Breakwaters, Miguel Losada, Nobuhisa Kobayashi and Francisco L. Martín, WW Mar./Apr. 92, p207-212.

Subsidence
Applications of Remote Sensing to Drainage, Sun F. Shih,
Edwin T. Engman and Christopher Neale, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), 9547-552.
Building Response to Excavation-Induced Settlement,
Marco D. Boscardin and Edward J. Cording, GT Jan.
89, p1-21.

89, pl-21.

Design Considerations for Small Artificial Islands in Franks Tract, California, Craig H. Everts, Vedat Demirel, Russell H. Boudreau, Emy T. Carpenter and Richard Dornhelm, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p77-973.

Geomechanics of Subsidence Due to Pumping of Groundwater, Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1-26.

1992), pl-26.
Offishore Challenge, Gordon H. Moore and Juan J. Campo, CE Oct. 92, p48-51.
Optimal Aquifer Management for Controlling Land Subsidence, Theodore G. Cleveland and Lu-Chia Chuang, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p872-877.
Predicting Effects of Subsidence on Landfill Caps, A. W. Bredariol, J. Larralde, J. P. Martin and C. A. Fiori, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p360-364.

Subsidies, financial New York Engineers Endow Alma Mater, CE Dec. 92, p8.

Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Solvent Substitutes, Benerito S. Martinez, Jr., Ricardo B. Jacquez and Walter H. Zachritz, II., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p169-174.

Substrates
Effluent Nitrite Accumulation in the Heterotrophic Denitrification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

Substructures

Sprayed-Zinc Galvanic Anodes for the Cathodic Protection of Reinforcing Steel in Concrete, Rodney G. Powers, Alberto A. Sagues and Toshiya Murase, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p732-747.

Subsurface drainage
Alternative Methods of Drainage Management in San
Joaquin Valley, California, S. Alireza Taghavi and Be
Everett, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamour, ed., 1992), p332-337.
Design of Landfill Drainage Systems, Bruce M. McEnroe,
(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p208-213.
Design of Transient and Steady State Drain Spacing, Ly-

Design of Transient and Steady State Drain Spacing, Lyman S. Willardson and Masoud Alemi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p57-62.

ET from Shallow Groundwater Maintained by Controlled-Drainage/Subirrigation System, James L. Fouss and James S. Rogers, (Irrigation and Drainage: Saving a Threatenend Resource—In Search of Solutions, Ted Engman, ed., 1992), p594.
Including Uncertainty of Hydraulic Conductivity into Drainage Design, J. Gallichand, D. Marcotte and S. O. Prasher, IR Sept/Oct. 92, p744-756.
Influence of Irrigation on Subsurface Drainage, J. C. Gould and J. C. Guitjens, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p183-188.
Leakage Mechanism Through Double Liner Systems, Abdul R. Mulla Saleh, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p192-200.
Ongoing Monitoring Results Pilot Stormwater Disposal Facilities, Pierce County, Washington, Molly Adolfson and Dan Clark, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p510-515.

515. Geohring, (Irrigation and Drainage Design, Larry D. Geohring, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p26-31.
Surface and Subsurface Drainage of Metropolitan City in Arid Zone, Achi M. Ishaq, IR Jan./Feb. 92, p19-35.

569

Subsurface drains
Agricultural Drains and Safety of Dams, James M. Verzuh and Glen D. Sanders, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p51-56.

bsurface flow

Subsurface flow Comparison of Numerical Modeling Approaches for Sub-surface Immiscible Contaminant Transport, Klaus Rathfelder and Linda M. Abriola, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p275-280.

Subsurface lavestigations

Analysis of Uncertainty in Geotechnical Site Investigations, and Why, Milton E. Harr, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
765-786

Waste Management Program Committee, 1992), pp55-758.
Fiber Optics Detect Contaminants, CE Dec. 92, p8.
Fiber Optics Detect Contaminants, CE Dec. 92, p8.
Forecasting the Space-Time Stability of Radioactive Waste Isolation in Salt Formations, E. B. Anderson, A. I. Karelin, A. S. Krivokhatsiy and V. G. Savonenkov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2114-2121.
Geotech Test Site Program Set, CE Dec. 92, p13-14.
Geotechnical Investigation Strategies for Lunar Base, Dan A. Brown and Glenn Rix, AS Apr. 92, p199-213.
Landslide Hazard Analysis for Pipeline Design, Northeast Utah, Jeffrey R. Keaton, Robert M. Robison and Jacqueline D. J. Bott, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204.
Longevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, Bruce D. Marsh and Ronald G. Resmini, (High Level Radioactive Waste Management, High Level Radioactive Waste Management of Subsurface Data Using Spatial Analysis, Teresa M. Adams and Peter J. Bosscher, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p582-589.
Norway's Olympic Cavern, Rajinder Bhasin and Fredrik Leset, CE Dec. 92, p60-61.

cu., 1972.), p382-369.

Norway's Olympic Cavern, Rajinder Bhasin and Fredrik Laset, CE Dec. 92, p60-61.

Potentially Active Faults in Dam Foundations (Paper introduced by Clarence R. Allen), J. L. Sherard, L. S. Cluff and C. R. Allen, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p204-266.

Quarry Inspection: A Geological Perspective, Gary J. D'Urso, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p185-199.

60., 1992.), p183-197.
The Reconstruction of the Morton Street Evacuation and Ventilation Shaft, Daniel M. Hahn, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p91-106.

Resolving Contract Disputes Based on Misrepresenta-tions, H. Randolph Thomas, Gary R. Smith and R. Martin Ponderlick, CO Sept. 92, p472-487. Subsurface Characterization and Design of an Ash Land-fill on Varved Clays, Siamac Vaghar, Stanley M. Bem-ben and Markus Walbaum, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803. Swimming Pools Supported by Dissimilar Bearing Strata.

Swimming Pools Supported by Dissimilar Bearing Strata, G. S. Kovacs, CF May 92, p118-120.

Underwater Slope Failure, Port Hueneme, W. H. Roth, D. T. Liu, M. Tischuk and T. Hjort, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p940-955.

Use of Manned Submersibles to Investigate Slumps in Deep Water Gulf of Mexico, Earl H. Doyle, Michael J. Kaluza and Harry H. Roberts, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p770-782.

Object Oriented Spacecraft Architecture, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2328-2337.

Systems Integration of Lunar Campsite Vehicles, Stephen Capps and Theron Ruff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1976-1987.

Subway tunnels Something Fishy in the Subways, CE Dec. 92, p8.

Czechoslovakian Bridge: A Firsthand Look (ltr), Jarda D. Nehybka, CE July 92, p36.

L.A. Metro Rail Red Line Motoring Toward Start-up, CE Feb. 92, p20.

Feb. 92, p20.
Start-Ups, CE May 92, p8.
Tunnel Seepage Control by the Interior Grouting Method, Bruce A. La Penta, Reuben H. Karol and Charles H. Arnold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p436-448.

Soil Suction-Potential Model, Abdulmohsin W. Dhowian, GT Apr. 92, p521-539.

Vortex Suppression in Wet-Pit Pump Intakes, Tatsuaki Nakato, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p478-481.

Sulfates

Concrete Deterioration, East Los Angeles County Area: Case Study, Gregory F. Rzonca, Robert M. Pride and Dean Colin, CF Feb. 90, p24-29.

Durability Failure of a Concrete Block Port Pavement, Marian P. Rollings and Raymond S. Rollings, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), pl-15.

Failures, Thomas D. White, ed., 1974.), pi-13.

A Modified Sulfate Process to Lunar Oxygen, Thomas A.
Sullivan, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Müller, ed., 1992), p641-650.
Rebar Corrosion in MgSO4 Solution, Mohammad Shamim Khan and Abdul-Hamid J. Al-Tayyib, MT Aug. 92,

p292-299

nifide buildup

Biochemical Control of Sulfide Production in Wastewater Collection Systems, Ricardo B. Jacquez and Hamdy H. El-Rayes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p327-333.

Offshore Challenge, Gordon H. Moore and Juan J. Campo, CE Oct. 92, p48-51.

Sulfur as a Lunar Resource, G. Heiken, D. Vaniman and H. Hawkins, Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p355-564.

Utilization of Waste Sulfur in Construction Materials and tilization of waste Suttur in Construction Materials and as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, William C. McBee, Frank E. Ward, William T. Dohner and Harold Weber, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), pl 16-127. Sulfur dioxide

Integrated Assessment of Acid-Deposition Effects on Lake Acidification, Edward S. Rubin, Mitchell J. Small, Cary N. Bloyd and Max Henrion, EE Jan./Feb. 92, p120-134.

The Use of Phosphogypsum-Based Slag Aggregate in Hot Mix Asphalitic Concrete, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p202-216.

Bioleaching of Metals from Sewage Sludge by Sulfur-Oxidizing Bacteria, J. F. Blais, R. D. Tyagi and J. C. Auclair, EE Sept./Oct. 92, p690-707.

The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.

Time Series Prediction Using Neural Networks, James Villarreal and Paul Baffes, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p268-282.

Supercritical flow

Drop Manholes in Supercritical Pipelines, George C. Christodoulou, IR Jan/Feb. 91, p37-47. Evaluation of Supercritical/Subcritical Flows in High-Gradient Channel, Douglas J. Trieste, HY Aug. 92,

p1107-1118.

Optimum Channel Contraction for Supercritical Flows, P. Rutschmann, O. F. Jiménez and M. H. Chaudhry, P. Rutschmann, O. F. Jiménez and M. H. Chaudhry, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p754-759.

Shock Pattern at Abrupt Wall Deflection, Markus Schwalt and Willi H. Hager, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p231-236.

1992), p231-236.

1992), p231-236.
Stability Problems in Stream Water Profile Computations, Gert Aron and Arthur C. Miller, (Hydraulic Engineering: Saving a Threatened Resource—In Search Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p846-851.
Trash Rack Blockage in Supercritical Flow, Steven R. Abt, Thomas E. Brisbane, David M. Frick and Charles A. McKnight, HY Dec. 92, p1692-1696.
WSPRO, A Model for Water-Surface PROfile Computations, James O. Shearman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p865.

1992), p865.

Probabilistic Analysis of Post-Tensioned Steel Girder Bridges, Sami W. Tabsh and Jack R. Kayser, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), p13-16.

Supports

Cables Support Skylight Roof at Morgan Library, CE Jan.
92, p18-19.

92, p18-19.
Design of a Support and Foundation for a Large Lunar Optical Telescope, Koon Meng Chua, Stewart W. Johnson and R. Sahu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1952-1963.
Elastic Buckling of Rectangular Plates with Curved Internal Supports, K. M. Liew and C. M. Wang, ST June 92, p1480-1493.

p1480-1493.

Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

PREPS: Analysis of Pipe Supports and Other Structures on the PC-386, Gregory Nakhimovsky and Charles E. Doherty, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p543-550. Slip Behavior of Cable against Saddle in Suspension Bridges, Koei Takena, Michio Sasaki, Kouichi Hata and Kazuo Hasegawa, ST Feb. 92, p377-391.

Support Structures for High-Resolution Optical Systems, Ralph M. Richard and Daniel Vukobratovich, AS Jan. 92, p24-43.

92, p24-43.

Surf zone
Estimating Extreme Values of Run-Up on Beaches, Scott
L. Douglass, WW Mar/Apr. 92, p220-224.
Wave-Induced Effective Stress in Seabed and Its Momentary Liquefaction, Tetsuo Sakai, Katsuya Hatanaka and Hajime Mase, WW Mar/Apr. 92, p202-206.

Surface defects
Controlled Braking on Uneven Roads, Dieter Ammon, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p65-68.
Digital Imaging Concepts and Applications in Pavement Management, Stephen G. Ritchie, TE May/June 90, p287-298.

p287-298. Paracterization of Concrete, M. A. Issa, A. M. Hammad and A. Chudnovsky, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130. Inspection Planning for Surface Fatigue Cracks, P. Friis-Hansen and H. O. Madsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p312-315.
Performance of Orthotropic Bridge Decks, Ali Touran

Performance of Orthotropic Bridge Decks, Ali Touran and Alex Okereke, CF May 91, p134-148.

Surface drainage Surface and Subsurface Drainage of Metropolitan City in Arid Zone, Achi M. Ishaq, IR Jan/Feb. 92, p19-35.

Road Aggregate Choice Based on Silicate Quality and Bi-tumen Adhesion, Petri V. Peltonen, TE Jan./Feb. 92,

p50-61.

Surface Irrigation
ALIVE (Advance Linear Velocity): Surface Irrigation
Rate Balance Theory, D. Renault and W. W. Wallender, IR, Jan./Feb. 92, p138-155.

Bayesian Inference for Feedback Control. II: Surface Irrigation Example, A. J. Clemmens and J. B. Keats, IR
May/June 92, p416-432.

Feedback Control of Basin-Irrigation System, A. J. Clemmens, IR May/June 92, p480-496.

Interpretation of Kostiakov Infiltration Parameters for
Borders, D. M. Hartley, IR Jan./Feb. 92, p156-165.

Mathematical Zero-Inertia Modeling of Surface Irrigation: Advance in Furrows, Gerd H. Schmitz and
Günther J. Seus, IR Jan./Feb. 92, p1-18.

Modeling Shallow Overland Flow in Surface Irrigation, B.
L. Maheshwari and T. A. McMahon, IR Mar/Apr. 92,
p201-217.

p201-217.

Surface mining

Lunar Mining—Surface vs. in Situ—A Comparative Study, Paulo Roberto Pereira, Russell J. Miller and Gary S. Brierley, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1195-1208.

Lunar Surface Mine Feasibility Study, Brad R. Blair, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1092-1103.

Lunar Surface Mining Equipment Study, Egons R. Podnieks and John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1104-1115.

Three-Dimensional Analytical Techniques for Assessing

p1104-1113.

Three-Dimensional Analytical Techniques for Assessing Overburden Toxicity as a Decision-Making Tool for Reclaimability Determinations, L. A. Parsons, K. Kirk and A. Wilhelm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p839-845.

Surface roughness
Shear Flow Between Walls in Relative Motion, H. J. Leutheusser, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p608-611.

Efficient Sizing of Storm Water Treatment Ponds, Thomas R. Sear and Brenda van Ravenswaay, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

Karamouz, ed., 1992, J. 190-763.
Hydraulic Roughness Coefficients for Native Rangelands, Mark A. Weltz, Awadis B. Arslan and Leonard J. Lane, IR Sept./0ct. 92, p.76-790.
Optimum Center-Pivot Irrigation System Design with Tillage Effects, Y. Mohamoud, Thomas R. McCarty and Loyd K. Ewing, IR Mar./Apr. 92, p.291-305.

## Surface tensis

Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, Kuanchung J. Lin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p216-219

Surface waters

3H and 14C as Tracers of Ground-Water Recharge, John
A. Izbicki, Robert L. Michel and Peter Martin, (Irrigation and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p122-127.

Agricultural Impacts on Surface Water via Ground Water, William L. Magette, Adel Shirmohammadi, James D. Wood and Theodore H. Ifft, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p407-412.

Conjunctive Optimization Models, Tom Maddock, III. and William W-G. Yeh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1242.

Conjunctive Use—Advantages, Constraints, and Examples, Jack J. Coe, IR May/June 90, p427-443.

Data Set for Verification of 3-D Free-Surface Hydrodynamic Models, Carquinez Strait, California, P. E. Smith, R. N. Oltmann and M. R. Simpson, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p430-435.

Evaluation of Ozone Disinfection Systems: Characteristic Time T, O. Lev and S. Regli, EE Mar./Apr. 92, p268-285.

Expert System for Agricultural and Water Quality Management, William L. Magette and Adel Shirmohammadi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p442-447.

Peasibility of Water Supply for City of Houston Subsidence Zones Five and Six, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p480-485.

Hallsboro Basin Surface Water Management Model, David P. Preusch, Jayantha Obeysekera, John M. Crouse and Kendrick Logsdon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p810-816.

Hydrodynamics for Water Quality Models, Mark Dortch and Billy Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p145-

Hydrologic Considerations in Mined Land Reclamation, Patrick T. Tyrrell and Martin W. Stearns, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p383-388.

Linking GIS with Hydrologic Modeling, Barry Evans, Jef-frey Grimm, Larry Thornton and Paul Sanders, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p499-504.

A Novel Tracer Injector for Surface Water Studies, Cynthia J. Baker and Deborah J. Mossman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p410-415.

Participative Process in Tube Well Irrigation Develop-ment, Manuel Olin, IR Nov./Dec. 92, p882-894.

Proposed Similarity Law for Surface Velocity in Hydrau-lic Models, Dajin Yu and Weijun Zhao, HY Sept. 92, p1318-1325.

Real-Time Simulation and Visualization of 2-D Surface Water Flow, H. C. Lin, N. L. Jones and D. R. Richards, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-340.

and Nam G. Bowlink, ed., 1992, p. 39-30.

Scheduling of Ground Water Pumpage in Alluvial Aquifers to Minimize the Impact on Surface Water Diversions, John C. Tracy and Munied Al-Sharif, (Water Resources Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), p. 79-83.

System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Ralph A. Wurbs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p498-503.

Topographic Effects on Stormflow Acidity, David Wolock, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p878-883.

Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions), Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.

Bhowmik, ed., 1992), p778-783.

Surface waves
Component Wave Interactions and Irregular Wave Kinematics, Jun Zhang, Robert E. Randall and C. Anthony Spell, WW July/Aug. 92, p401-416.
Design of Wave Barriers for Reduction of Horizontal Ground Vibration, Tahmed M. Al-Hussaini and Shahid Ahmad, GT Apr. 91, p616-636.

Effects of Multiple Modes on Rayleigh Wave Dispersion Characteristics, Kohji Tokimatsu. Shuji Tamura and Hisaya Kojima, GT Oct. 92, p1529-1543.

Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelps, (Material: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p519-531.

Integrity Testing of Concrete Elements Using Surface Waves, B. R. Bowen, J. M. Roesset and K. H. Stokoe, II., (Enjineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p952-955.

Linear Surface Waves Over Rotating Fluids, Ting-Kuei Tiay, WW Mar/Apr. 91, p156-171.

Seasonal Soil Strength by Spectral Analysis of Surface Waves, Bernard D. Alkire, CR Mar. 92, p22-38.

A Three-Dimensional Tidal Circutation Model Based on Semi-Implicit Finite-Difference Methods, Ralph T. Cheng and Vincenzo Casulli, (Prydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p428-429.

Use of Short-Period Microtremors for V. Profiling, Kohji Tokimatsu, Kenichiro Shinzawa and Shinichi Kuwava.

Use of Short-Period Microtremors for V<sub>4</sub> Profiling, Kohji Tokimatsu, Kenichiro Shinzawa and Shinichi Kuwaya-ma, GT Oct. 92, p1544-1558.

Surge
Debris Torrents and Professional Responsibilities, S. O.
Russell, El Jan. 90, p49-55.
Nonlinear Stability of Differential Surge Chambers,
Xiao-Liang Yang and Chen-Shan Kung, HY Nov. 92,
p1526-1539.

Remote Automated Wave and Water Level Monitoring System Deployed at Agat Harbor, Guam, David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p898-907.

Surveying
Computerized Surveying Helps Egyptians Map Nile, CE
May 92, p26-27.
Delineating Theory for GPS Surveying, Alfred Leick, SU
May 92, p33-42.
Ecuador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, Ricardo Javier Moreno, SU
Nov. 92, p118-129.
Electronic: Theodolites: Comparison Test, Abdalla Elsa-dig Ali, SU Feb. 91, p3-8.
GPS/Positioned Digital Video for Airborne GIS Data Ac-quisition, Brent Wanless, SU Aug. 92, p80-89.
Photogrammetric Solution for Vehicle-Damage Investiga-tion, W. Fag. F. R. Wilson, D. King and T. Y. Shih, TE Nov./Dec. 92, p850-865.
Robust Testing Procedure for Detection of Multiple

Robust Testing Procedure for Detection of Multiple Blunders, Y. Gao, E. J. Krakiwsky and J. Czompo, SU Feb. 92, p11-23.

Using Expert Systems to Manage Professional Survey Practices, T. K. Koo and Y. B. Aw, SU May 92, p43-62.

Surveys
International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teresa Bowen MacArthur, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), p569-574.
Measurement of Deformations in Buried Pipeline, W. F. Teskey, D. A. Bayly and I. R. Colquhoun, SU Feb. 92, p1-10.

572

Surveys, data collection

A/E Compensation Levels Stay Flat as Vestiges of Recession Linger On, NE July 92, p15.

A/CE 1991 Salary Survey: Summary of Findings, Committee on Employment Conditions and Professional Activities Staff, El Apr. 92, p167-189.

ASCE Publications Still Rank High with Members, NE

ASCE Publications Still Rank High with Members, NE Aug. 92, p.1,8.

A Benchmark Slope Stability Study, Jose L.M. Clemente, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1520.

1992, p1320.

A Buyer's Market, CE Mar. 92, p8.

CERF Will Measure U.S. R&D Trends, CE Aug. 92, p8.

Computing in Civil Engineering: Current Trends and Future Directions, Nelson C. Baker and Glenn J. Rix, El Apr. 92, p139-155.

Apr. 92, p139-155.

Design Firms Feel Economic Pinch, But Effect is Uneven, NE Jan. 92, p2.

Engineer Shortfall a Myth: House Panel Calls NSF Study Seriously Flawed', NE May 92, p16.

Estimation of Pass-By Trips Using a License Plate Survey, Soumya S. Dey and Jon D. Fricker, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p42-46.

Highway Construction Use of Wastes and By-Products.

Highway Construction Use of Wastes and By-Products, Robert J. Collins and Stanley K. Ciesielski, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p140-152.

1772), p140-152.
Infrastructure Investment Builds Economic Muscle, Neil S. Grigg. CE June 92, p6.
Latest ASCE Salary Index is Released, CE May 92, p78.
Latest ASCE Salary Index is Released, CE Oct. 92, p68.
Latest ASCE Salary Survey Shows Upward Trend, NE Mar. 92, p1.

Mass Transit Means Massive Savings, CE Mar. 92, p8. Meet John Q. Member: Introducing Someone Who May be Very Much Like You, NE June 92, p1,4.

be Very Much Like You, NE June 92, p1,4.
Privatization on The Rise, CE May 92, p8, RAD Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.
Recycle, Yes; Pay for It, Maybe, CE Nov. 92, p10.
Responding to Public Opinion About Cumulative Long-Term Risks: Analysis and Communication of Risks from Climate Change and Hazardous Waste Sites, Robert E. O'Connor and Richard J. Bord, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p67-77.
Salary for Computer Professionals Varies, CE Nov. 92, p10.
Salary Increases Projected at 4.51%. CE July 92, p11.

pilo.
Salary Increases Projected at 4.51%, CE July 92, pil.
Site Traffic Impact Analysis Process: The Developer's
Perspective, Kenneth O. Voorhies, (Site Impact Traffic
Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed.,
1992), p205-210.

Socioeconomic Accounting in Construction, Amir Ta-vakoli, Robert G. Ashmun and Cynthia S. Collyard, El Apr. 92, p156-165.

Apr. 24, p136-103.
The Software License Minefield, Software Publishers Association, CC June 92, p6-8,14-15.
Still Working Without a Net, CE Mar. 92, p8.
Study Analyzes New Jersey Infrastructure Needs, CE Feb.
92, p24,26.

y2, p24,26.

Summary of Responses to Participant Questionnaire, Fifth Engineering Foundation Conference on Risk-Based Decisionmaking in Water Resources, (Risk-Based Decision Making in Water Resources, (Risk-Based Decision Making in Water Resources, (Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p360-371.

Survey Predicts Bridge Trends for the 1990s, CE Sept. 92, p12,14.

Traffic Impact Studies—Current Practices from Cities' Perspective, Daniel B. Rathbone, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p109-113.

1792, p107-113.
Trip Generation Rates, a Historical Look, Ann L. Koby and Dawn L. McKinstry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p37-

Unified Pavement Distress Index for Managing Flexible Pavements, C. H. Juang and S. N. Amirkhanian, TE Sept./Oct. 92, p686-699. User Fees: Who Pays and How Much?, CE Sept. 92, p19. Women Engineers Still Face Career Bars, New Study Shows, NE Oct. 92, p3.

Women in Civil Engineering—Graduate's Perspective, Jack D. Bakos, Jr., El Jan. 92, p16-29.

Bed-Load and Suspended-Load Transport of Nonuniform Sediments, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY June 91, p774-787.

P. Ojna, HY June 91, p. 1/4-18.
The Net-Flux Sediment Concentration Bottom-Boundary Condition for Rippled Beds, César Mendoza-Cabrales, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p. 126-131.
New Total Sediment-Load Sampler, Leo C. van Rijn and Moustafa T. K. Gaweesh, HY Dec. 92, p. 1686-1691.

Prediction Method for Local Scour by Warmed Cooling-Water Jets, S. Ushijima, T. Shimizu, A. Sasaki and Y. Takizawa, HY Aug. 92, p1164-1183.

# espended sediments

Entrainment of Bed Sediment Into Suspension, Marcelo Garcia and Gary Parker, HY Apr. 91, p414-435.

Garcia and Gary Parker, HY Apr. 91, p414-435. Entropy-Based Velocity Distribution Model in Study of Distribution of Suspended-Sediment Concentration, Chao-Lin Chiu and Corey A. Rich, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p520-525.

The Net-Flux Sediment Concentration Bottom-Boundary Condition for Rippled Beds, César Mendoza-Cabrales, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p126-131.

Sediment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p677-

Suspended Sediment-Transport Capacity for Open Chan-nel Flow, Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204.

Vertical Sediment Distribution, Jin Ren Ni and Guang Qian Wang, HY Sept. 91, p1184-1194.

# Suspended solids

Chemical-Constituent Load Removal Efficiency of an Urban Detention Pond/Wetlands System in the Denver Metropolitan Area, Colorado, James R. Kunkel, Timothy D. Steele, Ben Urbanas and Jay Carlson, (Environmental Engineering: Saving a Threatened Resource—In Search of Salutions, F. Pierce Linaweaver, ed., 1992), p352-357.

Influence of Gas Phase Turbulence on the Transport of Particles, Jennifer L. Sinclair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042.

Measuring Ozone by Indigo Method: Interference of Suspended Material, Mary E. Williams and Jeannie L. Darby, EE Nov./Dec. 92, p988-993.

Model for Biological Reactors Having Suspended and At-tached Growths, Chi-Yuan Lee, EE Nov./Dec. 92, p982-987.

Suspension

Buckling of Suspended Cambered Girders, Walter L.

Peart, Edward J. Rhomberg and Ray W. James, ST

Feb. 92, p505-528.

Fractal Concept Used in Time-of-Concentration Esti-mates, Gert Aron, James E. Ball and Thomas A. Smith, IR Sept./Oct. 91, p635-641.

Sway
Free Vibration of Embedded Foundations: Theory Versus
Experiment, George Gazetas and Kenneth H. Stokoe,
II., GT Sept. 91, p1382-1401.

Democracy and Expertise: The Story of Ringhals 3 in Sweden, Göran Sundqvist, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p166-172.

The Importance of the Site for the Safety of a Repository for Spent Nuclear Fuel in Sweden, Tonis Papp, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2136-2144.

Lessons Learned from the Performance Assessment of SKI Project-90, J. Andersson, K. Andersson, S. Norrby and S. Wingefors, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2109-2113.

R&D Cooperation by Swedish Contractors, J. Bröchner and B. Grandinson, CO Mar. 92, p3-16.

Swedith High-Level Radioactive Waste Management Issues, Per-Eric Ahlström, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p33-40.

Validation, Acceptance and Licensing: How Much Scientific Facts Can the Process Digest? Clas-Otto Wene, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p110-115.

Validation of Safety Assessment Models as a Process of Scientific and Public Confidence Building, Shlomo P. Neuman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 404-1413.

Deformation of Fill Slopes Caused by Wetting, Iraj Noorany, Joel A. Sweet and Ian M. Smith, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257.

Evaluation of Expansive Clay Soils in Tucson, Arizona, Mark W. Brooks and Edward A. Nowatzki, (Probabilis-tic Mechanics and Structural and Geotechnical Reliabil-ity, Y. K. Lin, ed., 1992), p220-223.

Review of Wetting-Induced Collapse in Compacted Soil, Evert C. Lawton, Richard J. Fragaszy and Mark D. Hetherington, GT Sept. 92, p1376-1394.

Swell versus Saturation for Compacted Clay, Robert W. Day, GT Aug. 92, p1272-1278.

Engineering Properties of Acrylate Polymer Grout, Ray-mond J. Krizek, Dominique F. Michel, Maan Helal and Roy H. Borden, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724.

Application of Performance Assessment as a Tool for Guiding Project Work, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p2126-2135.

Can the Kristallin-I Near-Field Model be Considered Ro-bust? I. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1770-1776.

Swiss High-Level Radioactive Waste Management Sys-tem Issues, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p25-27.

## Synthesis

Combustion Synthesis of Advanced Materials, J. J. Moore, H. J. Feng, N. Perkins and D. W. Readey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1389-1400.

Intelligent Objects for Synthesis of Structural Systems, Dionysis R. Rigopoulos and Irving J. Oppenheim, CP July 92, p266-281.

## Synthetic fibers

Fiber Ropes for Ocean Engineering in the 21st Century, John F. Flory, Henry A. McKenna and Mike R. Parsey, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p934-947.

# Synthetic hydrology

Stepwise Disaggregation Scheme for Synthetic Hydrology, Emidio G. Santos and Jose D. Salas, HY May 92, p765-784.

System analysis Comparison of Two Conceptual Models of Flow Using the TSA, Michael L. Wilson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p882-890. Derivation of Infiltration Equation Using Systems Ap-proach, V. P. Singh and F. X. Yu, IR Nov/Dec. 90,

proach, V. p837-858.

Houston Intercontinental Airport Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloth, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

1792, p.36 -732.
1792, p.36 -732.
1792, p.36 -732.
1792 and Bruce Ellingwood, ST Mar. 92, p.81 -827.
Probabilistic Methods in Hydroproject Maintenance, Walter O. Wunderlich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p514-519.

Reservoir Systems Analysis: Closing Gap Between Theo-ry and Practice, Slobodan P. Simonovic, WR May/June 92, p262-280.

p.262-280.
 Source-Term Calculations for a Total Systems Analysis, David W. Engel, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1758-1764.
 System Engineering and Risk, Brian W. Mar, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p.304-310.
 System Integration for the Disposal of Defense Transu-System Integration for the Disposal of Defense Transu-

kniv, ed., 1992), p.504-310.

System Integration for the Disposal of Defense Transuranic Waste, Mark W. Frei, Joseph A. Coleman and Sandra Fucigna, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p409-415.

Systems Analysis Applications at Hydrologic Engineering Center, Arlen D. Feldman, WR May/June 92, p249-261.

Systems Analysis in Ground-Water Planning and Management, William W. -G. Yeh, WR May/June 92,

December 2012 of Dynamic Structural Systems by Learning, Masaru Hoshiya, Yasuyoshi Obuchi and Shigeru Noda, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p124-127.

An Advanced First-Order Method for System Reliability, Sankaran Mahadevan and Thomas A. Cruse, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p487–490.

Evaluation of System-Reliability Methods for Cable-Stayed Bridge Design, Michel Bruneau, ST Apr. 92, p1106-1120.

Human Factors and System Safety in the Management of High-Level Radioactive Waste, Mary L. Lozano, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1542-1546.

Optimal Allocation of Resources in Repair and Maintenance of Bridge Structures, Giuliano Augusti, Antonio Borri and Marcello Ciampoli, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4.

Reliability Analysis of Truss Structures with Multistate Elements. II, A. Karamchandani and C. A. Cornell, ST Apr. 92, p910-925.

Structural System Design under Uncertainty Via Pareto Optimization, Dan M. Frangopol and Minoru lizuka, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p551-554.

Systems Reliability Approach to Fatigue of Structures, A. Karamchandani, J. I. Dalane and P. Bjerager, ST Mar. 92, p684-700.

A Systems Reliability Approach to the Safety of Steel Connections, Janice J. Trautner and Richard M. Bennett, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p495-498.

Use of Importance Sampling Constraints in System Optimization, Yingwei Liu and Fred Moses, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p112-115.

Systems
Case Study: Design of Groundwater Quality Monitoring
Systems, Leonard Cilli and Richard Bizub, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p75-79.
Carriculum for Future Civil Engineers: Practitioner's
Viewpoint, Guy E. Jester, El Oct. 89, p357-362.
Power Flow and Energy in Primary-Secondary Systems,
G. Chen and T. T. Soong, EM May 92, p1046-1051.
Response of Systems with Uncertain Parameters to Stochastic Excitation, H. Jensen and W. D. Iwan, EM May
92, p1012-1025.

chastic Excitation, H. Jensen and W. D. Iwan, EM May 92, p1012-1025.

Systems engineering
The Application of Open System Architecture to Planetary Surface Systems, D. A. Petri, L. A. Pieniazek and L. D. Toups, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p469-482.

Curriculum for Future Civil Engineers: Practitioner's Viewpoint, Guy E. Jester, El Oct. 89, p357-362.

Intelligent Objects for Synthesis of Structural Systems, Dionysis R. Rigopoulos and Irving J. Oppenheim, CP July 92, p266-281.

The Need for a True System Approach for High-Level Waste Management Systems Engineering Recommendations from the U.S. Nuclear Waste Technical Review Board, Dennis L. Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p822-826.

Object Oriented Spacecraft Architecture, Morgan Jones, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2328-2337.

Research/Application of System Engineering to Water Resources Systems, Dingzhong Dai, Xueren Lu, Yuanyu Guo and Xinyi Xu, WR May/June 92, p337-349.

System Engineering and Risk, Brian W. Mar, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stativi, ed., 1992), p304-310.

Systems Engineering Methodology for Engineering Planning Applications, Brian G. Hoefler and Brian W. Mar, El Apr. 92, p113-128.

Systems management to Get Computer Assist CF Apr. 92.

Systems management
Bridge Management to Get Computer Assist, CE Apr. 92,

Bridge Management to Get Computer Assist, CE Apr. 92, p14.
FM—An Educated, Integrated Approach, Sine Hill, Cynthia Hallman and Richard Berner, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p33-40.
How to Implement GIS: Tools and Procedures, Robert Newton, CC Nov. 92, p9-11.
Mars Basing, Brent Sherwood, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., 1992), p1964-1975.
Systems Integration of Lunar Campsite Vehicles, Stephen

p1700-1977.
Systems Integration of Lunar Campsite Vehicles, Stephen Capps and Theron Ruff, (Engineering, Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1976-1987.

T Joints
T-Joints in Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Aug. 91, p2258-2277.

Tailings

Design of Pena Colorada Tailings Retention Dam, Don-ald L. Sexton, James W. Carpenter and Ernest K. Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374.

388.

Determination of Geotechnical Properties of Uranium Tailings, Antonio Santos, José M. Martínez and Juan Luis Santiago, (Stability and Performance of Slopes and Embankments II, Raymond B. Secd, ed. and Ross W. Boulanger, ed., 1992), p175-191.

Laboratory Investigation of Beach Profiles in Tailings Disposal, Xiaosheng Fan and Jacob Masilyah, HY Nov. 90, p1357-1373.

Mitiastion of Acidic Mine Drainage; Engineered Soil Bar-

Nov. 90, pl.357-1373.
Mitigation of Acidic Mine Drainage: Engineered Soil Barriers for Reactive Tailings, Abdel-Mohsen O. Mohamed, Raymond N. Yong and Boon K. Tan, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462.

Modeling Desiccating Behavior of Mine Tailings, Gareth E. Swarbrick and Robin Fell, GT Apr. 92, p540-557. Roller Compacted Concrete Tailing Retention Dam, Daniel L. Johnson, Nigel A. Skermer and Frank Bergstrom, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), n181-107.

Seismic Assessment of Tailings Dams, Thomas G. Har-per, Harvey N. McLeod and Michael P. Davies, CE Dec. 92, p64-66.

Pailwater

Dynamic Fish Growth Modeling for Tailwater Fishery
Management, Ming Shiao, Gary Hauser, Gary Chapman, Bruce Yeager, Tom McDonough and Jim Ruane,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p1136-1141.

HGL Elevation at Pipe Exit of USBR Type VI Impact
Basin, Charles E. Rice and Kem C. Kadavy, HY July
91, p929-933.

Tip 1925-993.
 Steady and Unsteady Flow Profiles in Reclamation, Curtis J. Orvis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p872-877.

Talwan
The Drought Occurrence and Response Measures in Taiwan Area, 1991, Hong-Hsi Hsu and Jinn-Chuang Yang,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p977-987.
Real-Time Operation of Tanshui River Reservoirs, JanTai Kuo, Nien-Sheng Hsu, Wen-sen Chu, Shian Wan
and Youn-Jan Lin, WR May/June 90, p349-361.

and Youn-Jan Lin, WR MayJune 90, p349-361.

Tall buildings

3D Analyses of Complex Buildings on Micros, Istvan Kadar and Ricardo A. A. Todeschini, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p551-557.

Analysis of Buildings Using Strain-Based Element with Rotational DOFs, A. K. H. Kwan, ST May 92, p1191-1212.

Formulation of a Knowledge-Base for Building Design Simulation, Claude Bedard and Mathi Ravi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1129-1138.
Functional Analysis in Continuum and Structural Mechanics, C. A. Nelson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p514-518.

Inductive Learning of Wind Bracing Design for Tall Buildings, Mohamad Mustafa and Tomasz Ar-ciszewski, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p190-203.

1992), p190-203.
Peaches and Concrete, Housh Rahimzadeh and Mark B. Haselton, CE Feb. 92, p42-44.
Ultimate Air Rights, Jeffrey Smilow, CE Nov. 91, p38-41.
Wind-Induced Response of Structurally Asymmetric High-Rise Buildings, M. Saiful Islam, Bruce Ellingwood and Ross B. Corotis, ST Jan. 92, p207-222.

Tall structures
Development of Design Spectra for Actively Controlled
Wall-Frame Buildings, Y. P. Wang, A. M. Reinhorn
and T. T. Soong, EM June 92, pl 201-1220.
Wavelet Transform Analysis of Several Transient or Nonstationary Phenomena in Engineering Mechanics,
James T. Kirby, Michael J. Chajes and Jeffrey A. Melby, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), p204-207.

Tanker ships

Minimizing the Risk and Impact of Tanker Accidents, C. S. Birt and A. J. Jordan, (*Ports* '92, David Torseth, ed., 1992), p670-681.

Tanks
The Affordable Space Platform: The STS External Tank, Matthew A. Bille, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p945-956.
Composites Performance in the Infrastructure, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p532-545.

Design Loads for Sloshing in TLP Pontoons Tanks, Stephen W. Balint, (Civil Engineering in the Oceans V, Robert T. Hudsspeth, ed., 1992), p99-113. Explosive Forming of Aluminum-Lithium Alloys, Al Doherty and Bao Nguyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1250-1261. Load Shortening in Plastic Buckling of Cylinders, Marwan El-Bkaily and Ralf Peek, EM Sept. 92, p1892-1906.

1906.

Parametric Study of Seismic Soil-Tank Interaction. I:
Horizontal Excitation, Medhat A. Haroun and Wajdi
Abou-Izzeddine, ST Mar. 92, p783-797.

Parametric Study of Seismic Soil-Tank Interaction. II:
Vertical Excitation, Medhat A. Haroun and Wajdi
Abou-Izzeddine, ST Mar. 92, p798-812.

Tuned Liquid Damper (TLD) for Suppressing Horizontal
Motion of Structures, Yozo Fujino, Limin Sun, Benito
M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p20172030. 2030

Tanzania

Pilot Waste-Stabilization Pond in Tanzania, Michael Yhdego, EE Mar./Apr. 92, p286-296.

Taper
Buckling Analysis of Structures Composed of Tapered
Members, Siu Lai Chan, ST July 90, p1893-1906.
Shear-Stress Distribution in Symmetrically Tapered Cantilever Beam, Edwin P. Russo and Gregory Garic, ST
Nov. 92, p3243-3249.
Straight, Single-Tapered Composite I-Beams of Orthotropic Materials, Robert J. Leichti and Chai H. Yoo,
MT Nov. 92, p399-414.

Taxation

Taxation

Engineering-Econometric Model of Energy Demand, Fabrizio Carlevaro, Jean-Luc Bertholet, Jean-Paul Chaze and Patrick Taffé, EY Aug. 92, p109-121.

Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, Carl B. Ellis and Cindy L. Rogers, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2207-2211.

Affordable Financing—The Crux of Affordable Housing, Rodolfo J. Aguilar, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p75-81. Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p33-38.

Taylor series
TMDS for Vibration Control of Systems with Uncertain
Properties, Hector Jensen, Mehdi Setareh and Ralf
Peek, ST Dec. 92, p3285-3296.

Teaching methods
Civil Engineering Education: Case Study Approach, Jeffrey S. Russell and Bob G. McCullouch, El Apr. 90, p164-174

Future Concerns in Environmental Engineering Graduate Education, Richard G. Luthy, David A. Bella, James R. Hunt, James H. Johnson, Desmond F. Lawler, Charles R. O'Melia and Frederick G. Pohland, El Oct. 92. p361-380.

p361-380.
Guidance for Engineering-Design-Class Lectures on Ethics, Richard H. McCuen, El July 90, p251-257.
Reflection in Problem Solving and Design, C. J. Khisty and L. L. Khisty, El July 92, p234-239.
Social and Science Issues in the Local Environment, I. Gilbert and M. Robinson, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p1813-1818.
UTEXAS3 Example Problems, Earl V. Edris, Jr. and Dale F. Munger, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066.

The Army Aviation Team from a Military Civil Engineer's Perspective, Paige E. Johnson, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p72-108.

Collective Excellence: Building Effective Teams, Mel Hensy, 1992, 0-87262-841-8, 110pp. Competition Leads to Losing, Frank Pierce Johnson, ME July 90, p258-261.

Construction Approach to Denver International Airport, Guy M. (Pat) Stricklin, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., tion: A New Inter-1992), p184-191.

Frontloading for Successful Team-Built Projects, Louis J. Martinez, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p504-507.

Implementation of TQM in Building Design and Construction, Gerald W. Chase and Mark O. Federle, Mark O. Federle, William Co. 192, p329-339.

Making Teamwork Work, Mel Hensey, CE Feb. 92, p68-

Managing and Motivating People on a Joint Venture Project, J. Daniel Carrier, ME Oct. 92, p362-366.

Jose, J. Daniel Carrier, ME Oct. 92, p362-366.

Nonmonetary Incentives: It Can be Done, Gary W. Fischer and Norman P. Nunn, ME Jan. 92, p40-52.

Organizational Design: Some Helpful Notions, Melville Hensey, ME July 90, p262-269.

Professionalism: Cornerstone of Engineering, Perry L. Smith, El July 92, p258-260.

Smith, Example of Technology to Solving Practical Problems, James R. Walker, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p908-917.

Appropriate Technology for Flood Warnings, Mark E. Nelson, Ce June 92, 964-66.

Challenges of The Changing Profession, Slobodan P. Simonovic, El Jan. 92, p1-9.

Dallas Goes Trenchless, A. V. Almeida, CE Sept. 92,

Developing Technologies for Lunar-Based Astronomy, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1853-1864.

Development of a Demonstration Program for a Dry Cask-to-Cask Transfer System with Dual Purpose Casks, Rita W. Bowser and Robert E. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2212-2218.

17721, p2212-2218. Education and Research in Japan's Construction Industry, Antonio Nanni, Hikaru Takeuchi and Kazuhisa Yahagi, El July 92, p284-293. Emerging Issues in Transportation Facilities Management, Sue McNeil, Michael Markow, Lance Neumann, Jeffrey Ordway and Donald Uzarski, TE July/Aug. 92, p477-495.

Evaluation of BAT for VOCs in Drinking Water, Robert M. Clark and Jeffrey Q. Adams, EE Mar./Apr. 91, p247-268.

Evaluation of New Building Technology, James D. Lutz, Luh-Maan Chang and Thomas R. Napier, CO June 90, p281-299.

Existentialism, Engineering, and Liberal Arts, David A. Bella, El July 90, p309-321.

Facilitating Technology for Electric Power Generation, Ian Pope, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p276-292.

Facilitating Technology for Fuel Production and Energy-Enhanced Products, Patrick Takahashi, Charles Ki-noshita, Stephen Oney and Joseph Vadus, (Ocean En-ergy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p293-305.

Grouting, Soil Improvement and Geosynthetics, Geo-technical Special Publication No. 30, 2 vols, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, 0-87262-865-5, 1480pp.

1992, 0-87262-865-5, 1480pp.

Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992, 0-87262-898-1, 127pp.

The Lunar Transit Telescope (LTT): An Early Lunar-Based Science and Engineering Mission, John T. McGraw, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 865-1879.

Multimedia in the Civil Engineering Classroom, Glenn Katz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p245-252.

Neutralysis: Lightweight Aggregate and Recycling, Robert

Neutralysis: Lightweight Aggregate and Recycling, Robert S. Merdes, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p81-91.

A New Era in Space Operations, Simon P. Worden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475.

New Technology Applicable to Tidal Power, G. C. Baker, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p42-69.

(Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p42-69.

Robotics for Radioactive Waste Management in AEA Technology Facilities, S. A. Legg, A. Staples and C. J. H. Watson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Role of the Coastal Engineer in Civil Engineering Practice, ASCE Coastal Engineering Technical Committee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p918-934.

Seattle Oil Keeps Going and Going, CE Mar. 92, p8.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Social and Science Issues in the Local Environment, L. Gilbert and M. Robinson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1813-1818.

Specs May be Written for Trenchless Construction, CE July 92, p29.

July 92, p.29.
State of the Art in Wave Power Recovery, A. Douglas Carmichael and Johannes Falnes, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p182-212.
Strategic Planning for Technology Development, Eitan S. Agai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1036-1041.
Strategies for Technology Push: Lessons from Construction Innovations, C. H. Nam and C. B. Tatum, CO Sept. 92, p507-524.
Towards a Spacefaring Civilization, Gordon R. Wood-Towards a Spacefaring Civilization.

Sept. 74, p30-72.

Towards a Spacefaring Civilization, Gordon R. Woodcock, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p2008-2022.

Kussell J. Miller, ed., 1992, p.2008-2022.
Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389.
Water Management: Challenge and Opportunity, Warren Viessman, Jr., WR Mar./Apr. 90, p155-169.

Technology asses

Assessing the Potential of E-Mail for Engineers: Case Study, F. Safayeni, A. Yu, L. Purdy and E. Lee, ME Oct. 92, p346-361.

Oct. 92, p346-361.

Evaluation Method for Advanced Acid Rain Compliance
Technology, H. Christopher Frey and Edward S. Rubin, EY Apr. 92, p38-55.

Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Iesus M. De La Garza and
Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Identifying Promising Hazardous Waste Reduction Technologies, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p139-144.

In-Vessel Compost Systems: Technology Status, Philip E.

Solutions, F. Pierce Linaweaver, ed., 1992), p139-144.
In-Vessel Compost Systems: Technology Status, Philip E. Smith and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p291-296.
Polycrystalline CdTe Solar Cells for Large-Scale Space Applications, John Trefny, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p798-803.
Polyolefin Plastic Water Service Line Performance, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p585-597.
System Concepts for a Series of Lunar Optical Telescopes, Max E. Nein, Billy G. Davis and John D. Hilchey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831.
Technology transfer

Technology transfer
Evaluation of Advanced Construction Technology with
AHP Method, Miroslaw J. Skibniewski and Li-Chung
Chao, CO Sept. 92, p577-593.
Flavors and Mixins of Expert Systems Technology Transfer Model for AEC Industry, Jesus M. De La Garza and
Panagiotis Mitropoulos, CO Sept. 92, p435-453.

Greenhouse Irrigation Technology Transfer in Spain, Elias Fereres, Francisco Orgaz, Nicolas Castilla and Jose Lopez, (Irrigation and Drainage: Saving a Threat-end Resource—In Search of Solutions, Ted Engman, ed., 1992), p215-220.

Hot Line Opens for Entrepeneurs, CE May 92, p8. New Infrastructure Center Formed, CE Mar. 92, p8

A Novel University-Industry-Government Partnership, Constantine N. Papadakis, Paul C. Claspy, Theo G. Keith and Michael J. Salkind, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), The Beath of the Constant of the Const

p2128-2133.
The Roads Ahead, Teresa Austin, CE Apr. 92, p54-57.
Technology Transfer for Projects in South America, Joseph B. Summers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p209-214.
Technology Transfer in Building Construction—Case of Seismic Design, Nancy S. Cushman, C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141.
Technology Transfer Lessons from a U.S. Water District.

B. Tatum, CO Mar. 92, p129-141.

Technology Transfer Lessons from a U.S. Water District, Douglas Welch and Karen McLaughlin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p203-208.

Technology Transfer to Developing Countries, William J. Carmack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p227-231.

Transfer of Terrestrial Technology for Lunar Mining, Robert A. Hall and Patricia A. Green, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1150-1161.

U.S. Lead Recycling Plant Uses Italian Technology. CE

U.S. Lead Recycling Plant Uses Italian Technology, CE June 92, p27-28.

Use of Pilos Projects for Technology Transfer in Develop-ing Countries, John L. Merriam, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p238-243.

Teleseismic Tomography of the Yucca Mountain Region: Volcanism and Tectonism, John R. Evans and Moses Smith, III., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2372-2380.

Assessing the Potential of E-Mail for Engineers: Case Study, F. Safayeni, A. Yu, L. Purdy and E. Lee, ME Oct. 92, p346-361.

The Effectiveness of Telecommuting as a Transportation Control Measure, Srikanth Sampath, Somitra Saxena and Patricia L. Mokhtarian, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p347-

Engineers are 'Ready for Prime-Time Players', CE July 92, p16.

Fax Network On-Line for Large Documents, CE July 92,

Trend in Local Area Network Utilization, Luh-Maan Chang and Li-Chung Chao, ME Jan. 92, p27-39.

Telemetry
Architectures for Mission Control at the Jet Propulsion
Laboratory, Roger A. Davidson and Susan C. Murphy,
(Engineering, Construction, and Operations in Space
III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1567-1578.
Telerobotic Field Geologist: Preliminary Results of a Feasibility Study, Robert E. Cole, Charlotte Albert-Thenet,
G. Jeffrey Taylor, Paul Johnson, Forrest Buzan, Joy
Ishigo and Curtis Ikehara, (Engineering, Construction,
and Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p1434-1442.

Telescopes
Design of a Support and Foundation for a Large Lunar
Optical Telescope, Koon Meng Chua, Stewart W. Johnson and R. Sahu, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), p1952-1963.
Developing Technologies for Lunar-Based Astronomy,
Stewart W. Johnson, Jack O. Burns, Koon Meng Chua
and John P. Wetzel, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p1853-1864.

Engineering Issues for Early Lunar-Based Telescopes, Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 92, p323-336.

Stewart W. Johnson, Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 92, p323-336.

Laboratory Evaluation of Footings for Lunar Telescopes, Koon Meng Chua, Kelly M. Golis and Stewart W. Johnson, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1941-1951.

Lunar Transit Telescope Lander Design, Husam A. Ormar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1880-1889.

The Lunar Transit Telescope (LTT): An Early Lunar-Based Science and Engineering Mission, John T. McGraw, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1865-1879.

Mitigation of Adverse Environmental Effects on Lunar-Based Astronomical Instruments, Charles L. Johnson, Kurtis L. Dietz, T. W. Armstrong and B. L. Colborn, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-1841.

NASA's Future Plans for Space Astronomy and Astrophysics, Michael S. Kaplan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1879-1891.

p1789-1797.

Operations Analysis for a Large Lunar Telescope, Christopher Thyen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1591-1602.

Preliminary Investigation of a Lunar 16 Meter Optical Telescope, Walter H. Gerstle, N. N. V. Prasad, Kirk Cessac and Thomas Kratochvil, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2305-2316.

Some Considerations for Instrumentation for a Lunar.

p2305-2316.

Some Considerations for Instrumentation for a Lunar-Based Solar Observatory, Raymond N. Smartt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1890-1901.

Structural Design of Lunar Radio Telescope Using Interactive CAD, Ferhat Atgul, Walter H. Gerstle and Stewart W. Johnson, AS Jan. 92, p12-23.

Support Structures for High-Resolution Optical Systems, Ralph M. Richard and Daniel Vukobratovich, AS Jan. 92, p24-24.

92, p24-43.

92, p.24-43.

System Concepts for a Series of Lunar Optical Telescopes, Max E. Nein, Billy G. Davis and John D. Hilchey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831.

Thermal Investigation of a Large Lunar Telescope, Sherry T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1842-1852.

Temperature
Ambient Temperature Effect in Concrete Dam Foundation Seepage, E. C. Kalkani, GT Jan. 92, pl-11.

BOD Test for Tropical Countries, Nilay Choudhari, Paritosh C. Tyagi, N. Niyogi, V. P. Thergaonkar and P. Khanna, E. Mar. Apr. 92, p.298-303.

Creep and Creep Rupture of Metallic Composites, D. N. Robinson, W. K. Binienda and M. Miti-Kavuma, E. M. Aug. 92, p.1646-1660.

Creep Behavior Model for Structural Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Aug. 92, p2261-2277.

92, p2261-2277.
Diffusion of Carbon Dioxide and Iodine Through Yucca Mountain Tuffis—Effects of Temperature and Moisture Content, Tevfik Bardakci, Franklin G. King and Ajeet Singh, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p1946-1952.
High-Temperature Properties of Fire-Resistant Steel for Buildings, Y. Sakumoto, T. Yamaguchi, M. Ohashi and H. Saito, ST Feb. 92, p392-407.
Hygrothermal Effects on Load-Duration Behavior of

Hygrothermal Effects on Load-Duration Behavior of Structural Lumber, Kenneth J. Fridley, R. C. Tang, Lawrence A. Soltis and Chai H. Yoo, ST Apr. 92, p1023-1038.

Hygrothermal Effects on Mechanical Properties of Lumber, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Feb. 92, p567-581.

Installation and Monitoring of Thermal Conductivity Suction Sensors in a Fine-Grained Subgrade Soil Sub-jected to Seasonal Frost, Walaa E. I. Knogali, Kenneth O. Anderson, Julian K. Gan and Delwyn G. Fredlund, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p153-167.

Irrigation Timing for Wheat Based on Climate, Crop, a Soil Data, R. P. Tripathi, IR May/June 92, p370-381

Soil Data, R. P. Tripathi, IR May/June 92, p370-381.
Load and Temperature Measurements for a Study of Rutting Under High-Pressure Tires, William C. Dass, Susan M. Dass and James G. Murtee, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212.
Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p511-516.

1992), p511-516.

Size, Temperature and Rate Effects on the Fracture Toughness of Saline Ice, Samuel J. DeFranco and John P. Dempsey, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p264-267.

Stochastic Simulation of Climate Input for Water Supply Forecasting, Roy W. Koch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p557-562.

Temperature Dependent Bridge Movements, Shashi Moorty and Charles W. Roeder, ST Apr. 92, p1090-

1105.

Temperature-Independent Relationships for Frozen Soils, H. Wijeweera and R. C. Joshi, CR Mar. 92, pl-21. Thermal Analysis for RCC—A Practical Approach, Stephen Tatro and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p389-406.

McLean, ed., 1725, p.05.

Thermal Investigation of a Large Lunar Telescope, Sherry
T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1842-1852.

Thermal Stratification Modeling of Lakes with Sediment Heat Flux, Ting-Kuei Tsay, Gordon J. Ruggaber, Steven W. Effler and Charles T. Driscoll, HY Mar. 92, p407-419.

Thermal-Structural Analysis Methods for RCC Dams, P. R. Barrett, H. Foadian, R. J. James and Y. R. Rashid, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p407-422.

Time-Dependent Cone Penetration Resistance Due to Blasting, Wayne A. Charlie, Mutabihirwa F. J. Rweby-ogo and Donald O. Doehring, GT Aug. 92, p1200-1215.

Temperature distribution
Improved Thermal Predictions in CE-QUAL-W2, Raymond S. Chapman and Thomas M. Cole, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p158-163.

Slip Velocity and Temperature Jump in Flow over Rough Surface, J. B. Zhang and V. H. Chu, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki,

ed., 1992), p604-607

Unconfined Granular Materials Thermalized by Fluctuating Horizontal Surfaces, Mark W. Richman and Richard E. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p900-

Temperature enecus
Characterization of the Topopah Spring and Tiva Canyon
Tuffs at Yucca Mountain, Ajeet Singh, Shamsuddin
Ilias and Gary Tatterson, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1953-1958.

Concreting at Subfreezing Temperatures, Charles J. Korhonen, Edel R. Cortez and Brian A. Charest, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p382-397.

The Construction of New Victoria Dam, Australia, Robert J. Wark, Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p63-82.

Effect of Ambient Temperature on Viscoelastically Damped Structure, K. C. Chang, T. T. Soong, S.-T. Oh and M. L. Lai, ST July 92, p1955-1973.

Effects of Bonding Stiffness on Thermal Stresses in Sandwich Panels, R. Hussein, P. Fazio and K. Ha, AS Oct. 92, p480-490.

92, p480-490. Effects of CCA Treatment and Drying on Tensile Strength of Lumber, J. E. Winandy, H. M. Barnes and P. H. Mitchell, MT Aug, 92, p240-251. Effects of Freezing on Impact Properties of RTM Composites, and Their Applications in Offshore Structures, Gregory J. Pope and Vistasp M. Karbhari, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p828-839. Effects of Sea-Level Rise on Bays and Estuaries, ASCE Task Committee on Sea-Level Rise and Its Effects on Bays and Estuaries, HY Jan. 92, p1-10. Experimental Study of the Transient Temperature Distri-

Experimental Study of the Transient Temperature Distributions in Concrete, Paul C. Hoffman and Stanley K. Ciesielski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p200-203

Field Instrumentation and Performance Monitoring of Rigid Pavements, Raymond S. Rollings and David W. Pittman, TE May/June 92, p361-370.

Global Climate Change Effects on Water Quality, G. K. Meyer and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

pl9-24.
Global Warming and Possible Effects on the Central and Southern Florida Project, James W. Vearil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl3-18.
Impact of HLW Thermal Output on Repository Design, J. L. Girotto, L. Chaudon and J. M. Hoorelbeke, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 277-278. 1992), p779-783.

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, Richard S. Haupt and Dale C. Bull, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p125-137.

Robert A. Eaton, ed., 1992), p125-137.

Integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, B. A. Miller, V. Alavian, M. D. Bender, D. J. Benton, P. Ostrowski, Jr., J. A. Parsiy and M. C. Shiao, Ulydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p563-568.

One-Dimensional Model for Analysis of CRC Pavement Growth, Dapeng Xin, Dan G. Zollinger and Ray W. James, TE July/Aug. 92, p557-575.

Prestress Level in Stress-Laminated Timber Bridges, Edward F. Sarisley and Michael L. Accorsi, ST Nov. 90, p3003-3019.

Problems in Hydrothermal Analysis. John Eric Edinaer

p3003-3019.
Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p164-169.
Safety and Service Life of Equipment Designed for Cold Climate Operation, V. P. Larionov, CR Sept. 92,

p111-123.

p111-123

Seasonal Monitoring of Pavements—A Whole Lot More, Cheryl Allen Richter, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janco, ed. and Robert A. Eaton, ed., 1992), p182-195.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p33-38.

Technological Parameters of Underground Facilities for Long-Term Storage of High-Temperature Sources, O. L. Kedrovsky, I. Y. Shishchits and V. N. Vorobjev, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2410-2414.

Temperature Dependent Bridge Movements, Shashi Moorty and Charles W. Roeder, ST Apr. 92, p1090-1105.

1105

Titus.

Temperature Scenarios for a Repository at Yucca Mountain, Benjamin Ross, [High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p784-789.

Winter Operability: Equipment Problems and Their Remedies, Deborah Diemand, CR Sepi. 92, p124-137.

Temporary structures

Clear-Span Structure Sets Temporary Record, CE Apr. 92, p18-19.

Housing Chernobyl Relocatees, William H. Claire, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p19-28.

Asymptotic Analysis of TLP Tendons and Risers, C. Oran, EM Jan. 92, p56-73. Bond Anchorage of Pretensioned FRP Tendon at Force Release, Antonio Nanni, Masaharu Tanigaki and Koichi Hasuo, ST Oct. 92, p2837-2854. Effect of Static Offset on TLP Modeling, C. Oran, EM

Jan. 92, p74-91.

Prestress Influence on Shear-Lag Effect in Continuous Box-Girder Bridge, Shih Toh Chang, ST Nov. 92, p3113-3121.

Service Load Behavior of Concrete Members Prestressed with Unbonded Tendons, M. H. Harajli and M. Y. Kanj, ST Sept. 92, p2569-2589.

ASCE Nashville Branch Involved in U.S. Science Fair,

CE Dec. 92, p76.

Seismic Mitigation of the Memphis Water System, Kevin M. Poe, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992),

Tennessee Valley Authority Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.

may 92, pot-one integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, B. A. Miller, V. Alavian, M. D. Bender, D. J. Benton, P. Ostrowski, Jr., J. A. Parsly and M. C. Shiao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p563-568.

Bhowmik, ed., 1992), p563-568.

Interfacing with the Public on Water-Related Issues—
What TVA is Doing, Janet C. Herrin and Arland W. Whitlock, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p293-298.

Operation of the Tennessee Valley Authority Water Control System Under Extreme Drought Conditions, H. Morgan Goranflo, Jr., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-365.

Tensile strength

Anisotropic Behavior of Cement-Grouted Sand, Ray-mond J. Krizek and Maan Helal, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p541-

Bonding Strength of Grouts and Behavior of Silicate Grouted Sand, C. Vipulanandan and A. Ata, (Grouting Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p700-711.

Constitutive Modeling of Slurry Infiltrated Fiber Concrete (SIFCON), David J. Stevens, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p992-995.

Direct Tensile Test: Stability and Bifurcation, Zdeněk P. Bažant and Luigi Cedolin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p357-360.

1992), p357-300.

Effects of CCA Treatment and Drying on Tensile Strength of Lumber, J. E. Winandy, H. M. Barnes and P. H. Mitchell, MT Aug. 92, p240-251.

Evolution of Damage in Brazilian Test Using Holographic Interferometry, A. Castro-Montero, Z. Jia and S. P. Shah, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p612-615.

Michael Ladicates in Tension, B. Mohenbert.

Fiber Suppressed Localization in Tension, B. Mobasher and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-

6 A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Addi-tives, W. Virgil Ping and Thomas W. Kennedy, (Mate-rials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p206-215.

Mechanical Properties of Microfine Cement/Sodium Sili-cate Grouted Sand, Raymond J. Krizek, Hung-Jiun Liao and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p688-699.

Method for Simulating Tension Performance of Lumber Members, Steven M. Cramer and William B. Fohrell, ST Oct. 90, p2729-2746.

Microfine Cement/Sodium Silicate Grout, Hung-Jiun Liao, Roy H. Borden and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p676-687.

Micromechanics Based Design for Pseudo Strain-Hardening in Cementitious Composites, Victor C. Li and H. C. Wu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p740-

Tensile-Integrity Structural Concepts for the Lunar Surface, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p276-283.

# Tensile stress

Analysis of Delamination of Post-Tensioned Silos, Judith J. Stalnaker and Mark D. Fugler, ST Apr. 92, p1014-1022.

Effect of Contraction Joints on Earthquake Response of Arch Dam, Gregory L. Fenves, Soheil Mojtahedi and Richard B. Reimer, ST Apr. 92, p1039-1055.

Comparative Evaluation of Plasticity Theories Against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.236-239.

Comparative Evaluation of Plasticity Theories against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, EM Oct. 92, p2104-2126.

Crack Analysis of Reinforced Concrete Tension Members, H. C. Chan, Y. K. Cheung and Y. P. Huang, ST Aug. 92, p2118-2132.

Fiber Suppressed Localization in Tension, B. Mobasher and S. P. Shah, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-

Free-Bending Fatigue Life Estimation of Cables at Points of Fixity, Mohammed Raoof, EM Sept. 92, p1747-

Kinematical Limit Analysis for Design of Soil-Nailed Structures, Ilan Juran, George Baudrand, Khalid Far-rag and Victor Elias, GT Jan. 90, 954-72. Nonlinear Impulsive Motions of Low-Tension Cables, Michael S. Triantafyllou and Christopher T. Howell, EM Apr. 92, p807-830.

Passive Inclined Anchorages in Sand, James D. Geddes and E. J. Murray, GT May 91, p810-814.

Predicting Tower Guy Pretension Using a Neural Net-work, Raja R. A. Issa, Desmond Fletcher and Ruth Ann Cade, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1922, p.1074-

Strain Compatibility Analysis for Geosynthetics Reinforced Soil Walls, Ilan Juran, Halis M. Ider and K. Farrag, GT Feb. 90, p312-329.

Theoretical Study of Stability Criteria for X-Bracing Sys-tems, Dong Q. Wang and Arthur P. Boresi, EM July 92, p1357-1364.

### Tension leg platforms

3D Frequency Domain Analysis of Offshore Structures, J. F. McNamara and M. Lane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.192-193.

Asymptotic Analysis of TLP Tendons and Risers, C. Oran, EM Jan. 92, p56-73.

Cyclic Behavior of a Deepwater Normally Consolidated Clay, Rathindra N. Dutt, Earl H. Doyle and Richard S. Ladd, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p546-559.

Design Loads for Sloshing in TLP Pontoons Tanks, Stephen W. Balint, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p99-113.

Design of Teusion Leg Platforms: A Knowledge Based Approach, John M. Niedzwecki and Oriol R. Rijken, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p288-293. Effect of Static Offset on TLP Modeling, C. Oran, EM Jan. 92, p74-91.

Jan. 92, p74-91.

Equivalent Statistical Quadratization of Nonlinear Hydrodynamic Loads on TLPs, Ahsan Kareem and Yousun Li, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p890-905.

Response Statistics of Tension Leg Platforms Under Wind Loads, Jun Zhao and Ahsan Kareem, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p921-933.

A Simple Method to Compute Ways Loads on T. T. B.

1992), p921-933.

A Simple Method to Compute Wave Loads on a TLP, Moo-Hyun Kim, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p158-172.

TLP Fatigue Due to Second-Order Springing, S. R. Winterstein, T. Marthinsen and T. C. Ude, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p455-438.

Wave Runup and Forces on Cylinders in Regular and Random Waves, John M. Niedzwecki and Arun S. Duggal, WW Nov./Dec. 92, p615-634.

Tension structures

Cable Structures and Lunar Environment, Mohammed Ettouney, Haym Benaroya and Nissim Agassi, AS July 92, p297-310.

74, pa 31-310.

Rightable Structures of Non-Circular Cross Section, Eric E. Matsumoto, Shayan Pazargadi and Philip J. Richter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p147-158.

Tensile-Integrity Structural Concepts for the Lunar Surface, H. Benaroya and M. Ettouney, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), ed., Stein p276-283.

Terminal facilities

Terminal facilities
Container Terminal Planning: 2001, James E. Davis, (Ports 92, David Torseth, ed., 1992), p15-28.
Crane Rebuilding vs. New Purchase, Richard C. Leonard, (Ports 92, David Torseth, ed., 1992), p737-748.
Evaluation of Proposed Port Facilities, Charleston Harbor, South Carolina, Samuel B. Heltzel, (Ports 92, David Torseth, ed., 1992), p791-801.
Investigation of Coastal Conditions at Oregon Inlet, NC for the Replacement of the Herbert C. Bonner Bridge, Jeffrey G. Shelden, John R. Lesnik and M. Anthony Young, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p537-553.
Planning Operations of Bulk Loading Terminals by Simulation, Lal C. Wadhwa, WW May/June 92, p300-315.
A Removable Submarine Cover for Drydock No. 2 Modernization, Ted Bobroski and Joseph J. Bonasia, (Ports '92, David Torseth, ed., 1992), p506-519.
Seismic Survey Considerations in the Planning and Designees.

Seismic Survey Considerations in the Planning and Design of Dredging Projects for Marine Terminal Facilities, Charles J. Natale, Jr., Thaddeus A. Nowak, Jr. and Bruce A. Adams, (Ports '92, David Torseth, ed., 1992), p456-469.

Terminal Asphalt Patching: An Innovative Approach, C. Davis Rudolf, III. and George Degaraff, (Ports '92, David Torseth, ed., 1992), p836-848.

Terminology
List of Sea-State Parameters, IAHR Working Group on Wave Generation and Analysis, WW Nov/Dec. 89, p793-808.

Technology Transfer for Projects in South America, Joseph B. Summers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p209-214.

Terrain mapping
Drainage Analysis Using Triangulated Irregular Networks, Norman L. Jones and James Nelson, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p719-726.

Terrain models
Automated Delineation of Catchment Area Boundaries with TINs, Norman L. Jones and James Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p347-352.

Aertiary treatment
Municipal Wastewater for Power Plant Cooling Water.
Impacts on a Flow-Limited River, Mark Gerath, Fred Sellars, Monique Villars and Lisa Wolf, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p122-127.

Test equipment

An Accelerated Pavement Testing System, Thomas D.

White, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.

Eaton, ed., 1992), p112-124.

James Denning, CE Apr. 92,

Automating The Corps, James Denning, CE Apr. 92,

Automating The Corps, James Denning, CE Apr. 92, p65-67.
USAF's New Contingency Soils/Pavement Testing Van, Mark S. Buncher and Don J. Christiansen, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p27-40.

Test procedu

Test procedures

Forensic Analysis of a Two-Component Joint Sealant

Using FTIR-ATR, Laurand H. Lewandowski, Larry N.

Lynch and Rogers Graham, (Materials: Performance
and Prevention of Deficiencies and Failures, Thomas D.

White, ed., 1992), p53-65.

Learning to Love NDT, Bernard H. Hertlein, CE Jan. 92, p48-50.

Robust Testing Procedure for Detection of Multiple Blunders, Y. Gao, E. J. Krakiwsky and J. Czompo, SU Feb. 92, p11-23.

Use of the Break-Off Method for the Evaluation of High Performance Concrete, Tarun R. Naik and Amr S. Has-saballah, (Materials: Performance and Prevention of De-ficiencies and Failures, Thomas D. White, ed., 1992), p92-106.

Testing

An Accelerated Pavement Testing System, Thomas D. White, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), pl 12-124.

J. Barboza, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p79-85.

The Assessment of Armourstone for Shoreline Protection, R. Koopmans and R. B. Watts, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p82-94.

Bad Roads? Try Bogotá (ltr), Jose G. Monge, CE July 92,

BOD Test for Tropical Countries, Nilay Choudhari, Pari-tosh C. Tyagi, N. Niyogi, V. P. Thergaonkar and P. Khanna, EE Mar./Apr. 92, p298-303.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1026-1039.

Chrysler Takes the Bad Road to Make Better Cars, CE Feb. 92, p22.

Coatings Conundrum, CE Dec. 92, p8.

Compaction Grout, 1992, Edward D. Graf, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p275-287.

Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, E. Smailos and R. Köster, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1676-1680.

Demands Placed on Waste Package Performance Testing and Modeling by Some General Results of Reliability Analysis, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p994-1002.

Design of Latticed Steel Transmission Structures (ANSI/ ASCE 10-90) (St No. 90-010), Standards Committee for Design of Steel Transmission Towers, American Socie-ty of Civil Engineers, (Edwin H. Gaylord, chmn.), 1992, 0-87262-858-2, 64pp.

Determination of Fracture Toughness for Wood, Mikael Fonselius and Kirsti Riipola, ST July 92, p1727-1740.

581

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.

The Effects of Fillers and Admixtures on Grout Performance, Sandra Z. Tosca and Jeffrey C. Evans, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p337-349.

Efficacy of Drug Testing Programs Implemented by Contractors, Saleh Altayeb, CO Dec. 92, p780-790.

Fiber: Good For the Concrete Diet? William C. Panarese, CE May 92, p44-47.

CE May 92, p44-47.
Forensic Analysis Techniques for Joint Sealants, Rogers
T. Graham and Larry N. Lynch, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), p404-414.
Geotech Test Site Program Set, CE Dec. 92, p13-14.
Hydraulic Design of Offshore Breakwater in Sergipe, Brazil, Otavio J. Sayao and Charles P. Fournier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693.

Initial Comparison of Leach Behavior Between Fully Ra-dioactive and Simulated Nuclear Waste Glasses Through Long-Term Testing. Part 1. Solution Analy-sis, Xiangdong Feng and John K. Bates, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p925-933.

Investigation of the Behavior of Reinforced Plastic Col-umns with Concrete Core, Saeed Daniali, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p666-676.

Rotating Disk, Josef Daniel Ackerman, C. Ross Ethier, D. Grant Allen and Jan K. Spell, EE Sept./Oct. 92, p708-724.

A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Additives, W. Virgil Ping and Thomas W. Kennedy, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p206-215.

Limiting Design Parameters for Accelerated Pavement-Testing System, T. D. White, J. M. Albers and J. E. Haddock, Sr., TE Nov./Dec. 92, p787-804.

Haddock, Sr., TE Nov./Dec. 92, p787-804.

Metallized Microballoon EMI Shielding Materials, Boyle C. Cheng, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359.

Modular Robot Testbed, Chris Grasso, Wayne Jermstad, Mike Mathews, Jane Pavlich and Jim Avery, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453.

Partitioning of Elements by Refuse Processing, Robert K. Ham, Victor A. Hammer and Gary Boley, EE Sept./ Oct. 92, p725-743.

Oct. 72, p125-193.

Physicochemical and Rheological Properties of Microwave Recyled Asphalt Binders, Laurand H. Lewandowski, Rogers Graham and Jim Shoenberger, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p449-461.

Predicting Effluent PCBs From Superfund Site Dredged Material, Edward L. Thackston and Michael R. Paler-mo, EE Sept./Oct. 92, p657-665.

Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflectograph, Wim Th. Hoyinck and Joop van Zwieten, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p63-77.

QSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, N. H. Tang, D. J. W. Blum, R. E. Speece and N. Nirmalakhandan, EE Jan./Feb. 92, p17-37.

Resonant Column Testing of Dynamic Rock Properties, D. V. Morris and J. G. Delphia, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p527-530.

Scale Model to Test Advanced Nuclear Reaction, CE Mar. 92, p22,26.

Stability of Accropode(R) and Comparison with Paral-lelepipedic Block, Braulio G. Madrigal and José Loza-no, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p704-717.

Studies Related to Aircraft/Runway Friction Performance, Thomas J. Yager, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p64-71.

Thaw Weakening Research at the Minnesota Road Re-search Project, Michel J. Hovan and David E. New-comb. (Road and Airport Parvennt Response Monito-ing Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), pl 38-152.

Use of Contaminant Mobility and Transport Parameters to Determine Water Testing Protocol, Paul D. Robillard and Perry B. Kubek, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p831-836.

p831-836. Validation Issues Associated with Performance Assessment Modeling Activities for High-Level Radioactive Waste Repositories, Thomas J. Nicholson, Charles F. Voss and Johan Andersson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1437-1441. Waste Glass and Sewage Sludge Frit Use in Asphalt Pavements, Warren H. Chesner, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p296-307.

Waste Isolation Pilot Plant Robotic Investigation and Study, T. M. Schultheis and J. R. Walls, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

Water Taste Testers Are Thirsting for Work, CE Jan. 92, p22.

ptz.
Tests

3D Hydrodynamic Model Validation Through Simulations of Dynamic Processes, Leif H. Slordal, Eivind A. Martinsen and Alan F. Blumberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p525-537.

Beam-Column Behavior of Fabricated Steel Tubular Members, H. G. L. Prion and P. C. Birkemoe, ST May 92, p1213-1232.

Proof Streamsth in Battaned Composite Columns, Vasce.

Bond Strength in Battened Composite Columns, Yasser M. Hunaiti, ST Mar. 91, p699-714.

M. Hunatti, S1 Mar. 91, po99-714.
Cheering Up the Lumberjacks, CE Jan. 92, p11.
Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, C. J. Coleman, E. W. Baumann and N. E. Bibler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561.

Comparative Evaluation of Plasticity Theories Against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

1992), p236-239

A Comparison of Glass Reaction at High and Low SA/V: PCT Vs. MCC-1, William L. Ebert and John K. Bates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p934-942.

Corrosion Fatigue of Deepwater Offshore Materials, Gordon F. Fowkes and Harris L. Marcus, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p694-703.

Corrosion Resistance of Stainless Steels and High Ni-Cr Alloys to Acid Fluoride Wastes, H. D. Smith, K. H. Pool, D. B. Mackey and E. B. Schwenk, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p620-627.

Driving Characteristics of Open-Toe Piles in Dense Sand, Richard D. Raines, Oscar G. Ugaz and Michael W. O'Neill, GT Jan. 92, p72-88.

Evaluation of Plastic Bifurcation for Plane Strain versus Axisymmetry, Dunja Perić, Kenneth Runesson and Stein Sture, EM Mar. 92, p512-524.

Stein Sture, EM Mar. 92, p512-524.
Factors Influencing Passive Pullout Resistance, Joon-Ik Sohn, Soo-Il Kim, Young-Jin Kim and Dong-Deok Yoon, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1153-1162.
Flexural Analysis of Reinforced Concrete Beams Containing Steel Fibers, Byung Hwan Oh, ST Oct. 92, p2821-2836.

Flexural Tensile Strength of Partially Grouted Concrete Masonry, Ahmad A. Hamid, Omar A. Elnawawy and Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393.

Full Scale Tests on Concentrically Loaded Fiber-Reinforced Pultruded Columns, D. W. Scott, S. J. Yoon and A. Zureick, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576.

High-Strength Concrete Tested in Bridge Girders, CE Sept. 92, p27-28. Hydraulic Conductivity of Three Geosynthetic Clay Liners, Paula Estornell and David E. Daniel, GT Oct. Liners, Paula Es 92, p1592-1606.

Interpreting Dredge Material Bioassay Data—COBIAA, Charles H. Lutz, Thomas M. Dillon, Mark H. Houck and Jeff R. Wright, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p108-113.

In-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transpor-tation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-254.

1992), p219-234.
Moduli and Damping Factors of Soft Marine Clays, Takaaki Kagawa, GT Sept. 92, p1360-1375.
On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, Gordon K. F. Lee, Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009.
Cridation of Spent Fuel in Air at 175 to 195°C, R. F. Fin.

Russell J. Miller, ed., 1992), p999-1009.
Oxidation of Spent Fuel in Air at 175 to 195°C, R. E. Einziger, L. E. Thomas, H. C. Buchanan and R. B. Stout, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1449-1457.
Performance of Test Fill Constructed on Soft Peat, R. Kevin Tillis, Michael R. Meyer and Edwin M. Hultgren, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p775-787.

Pipe Plunge Pool Energy Dissipator, Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323. Put to the Test, Paul Tourney and Neal Berke, CE Dec. 92, p62-63.

92, pp2-03.

Removal of VOCs and TEL in Iron-Rich Groundwaters,
James E. Rumbo, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linawaever, ed., 1992), pl16-121.

The SHRP-LTPP Asphalt Resilient Modulus Pilot Study

William D. Utiliam and Ironthen I. Groomer (Materi.)

william O. Hadley and Jonathan L. Groeger, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p130-145.

Slab Behavior in Composite Beams at Openings. II: Tests and Verification, Soon Ho Cho and Richard G. Red-wood, ST Sept. 92, p2304-2322.

wood, ST Sept. 92, p2.394-2322.
Stability of Rock Armour Under Random Wave Attack:
Performance of Non-Standard Rock Shapes and Gradings, A. P. Bradbury and N. W. H. Allsop, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p64-81.

G. Stadilty of the Oiga C Test Embankment, J. G. Lavallée, G. St-Arnaud, R. Gervais and Y. Hammamji, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1006-1021.

Static Response of Prestressed Girders with Openings, John B. Kennedy and Hany Abdalla, ST Feb. 92, p488-504

Strength and Behavior of Slender Steel Pipe under Pre-stressing Force, Zenon A. Zielinski and Hamid Mobasher-Fard, ST Oct. 92, p2911-2926.

Mobasher-Fard, ST Oct. 92, p2911-2926.
Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, J. B. Case, J. A. Fernandez and J. R. Tyburski, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2298-2305.
Test of Cold-Formed Channels with Local and Distortional Buckling, Young B. Kwon and Gregory J. Hancock, ST July 92, p1786-1803.
Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, Lawrence C. Bank, Zuhan Xi and Eric Munley, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631.

Type Curves for a Slug Test in an Infinitely or Semi-infinitely Thick Aquiler, Gary R. Chirlin, (Symposium on Ground Water, Gerard P. Lennon, ed. and Shakrokh Rouhani, ed., 1991), p169-174.

Rouhani, ed., 1991), p169-174.

Uplift Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaly, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

Vacuum Melting and Mechanical Testing of Simulated Lunar Glasses, J. E. Carsley, J. D. Blacic and B. J. Pletka, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1219-1231.

Assessment of Derived Flood Frequency Distributions, Timothy H. Raines and Juan B. Valdes, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, p268-273.

Double Diamonds: New Brand for a Texas Bridge, Thomas G. Lovett and Dennis W. Warren, CE Apr. 92, p42-45.

193. Instrumenting the 'Y', Carin L. Roberts, John E. Breen and Patrick M. Bachman, CE Nov. 92, p48-51. Quarry Techniques for Dimensional Breakwater Stone, Stephen N. Stehlik, R. D. Knisely and C. L. Kramer, Chrusbility of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), 1201-22. p170-184.

pt 10-104.
System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Ralph A. Wurbs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p498-503.
Texas Memorial Attains ASCE Landmark Status, CE Dec. 92, p75.

United States Geological Survey Bridge Score Evaluation.

Dec. 92, p75.

United States Geological Survey Bridge Scour Evaluation Program in Texas, David D. Dunn and Henry R. Hejl, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p82-84.

Use of Portable Simulator in Designing Channel Improvements for Port of Brownsville, Texas, Dennis Wayne Webb and Larry Leon Daggett, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614.

Constructing Radiation Shields with Textiles for Lunar Applications, J. Lewis Dorrity and James W. Brazell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-377.

Harbour Development in Southern Part of Thailand, Sutat Weesakul, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369.

Thawing

Thawing

Estimating Thaw-Strain Settlement of Frozen Fill, G.

Scott Crowther, CR Dec. 92, p152-159.

Instrumentation for Vehicle Mobility Testing in the Frost

Effects Research Facility, Elisabeth Berliner and Sally
Shoop, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.

Eaton, ed., 1992), p12-26.

Thaw Weakening Research at the Minnesota Road Research Project, Michel J. Hovan and David E. Newcomb. (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.

Eaton, ed., 1992), p138-152.

Theories
ALIVE (Advance Linear Velocity): Surface Irrigation
Rate Balance Theory, D. Renault and W. W. Wallender, IR Jan./Feb. 92, p138-155.
Beyond Push-Button GPS, Alfred Leick, CE June 92,
p75-76.
Empily of Iterative Shear Deformation Theories for Shel-

p75-76.
Family of Iterative Shear-Deformation Theories for Shallow Shells, Zenon Rychter, EM Nov. 92, p2159-2175.
The General Theory of Quantitative Risk Assessment, Stan Kaplan, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, p11-39.
The Granddaddy of All Megaprojects, CE Nov. 92, p10. Highly Accurate Adaptive hp-Methods for Linear Elastostatics, J. Tinsley Oden, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p628-631.

Numerical Implementation of Nonlocal Elastoplastic Damage Theory, H. Murakami and H. E. Read, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p248-251.

The Theory of Elasticity: 1950-1992 and Beyond: Concluding Remarks, Lawrence E. Goodman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p637-639.

Variational Solutions of the Von Karman Plate Theory Based on a Mixed Formulation, Wan-Lee Yin, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p656-659.

Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p.164-169.

Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, EM Aug. 92, p1661-1678.

The Thermal Analysis of BR-100: A Barge/Rail Nuclear Spent Fuel Transportation Container, A. B. Copsey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1848-1854.

Thermal Investigation of a Large Lunar Telescope, Sherry T. Walker, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 842-1852.

## Thermal convection

Temperature Scenarios for a Repository at Yucca Mountain, Benjamin Ross, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p784-789.

### Thermal diffusion

Experimental Study of the Transient Temperature Distri-butions in Concrete, Paul C. Hoffman and Stanley K. Ciesielski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p200-203.

Impact of HLW Thermal Output on Repository Design, J. L. Girotto, L. Chaudon and J. M. Hoorelbeke, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), 979-783.

1992, pt 19-103.
The Impact of Thermal Loading on Repository Performance at Yucca Mountain, Thomas A. Buscheck and John J. Nitao, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pt 1003-1017.

Structural Design of the GN&C Navigation Base for the Space Station Freedom, Lavonia Grant and Fred Cutting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p839-849.

Testing and Cobra-SFS Analysis of the VSC-17 Ventilated Concrete, Spent Fuel Storage Cask, Mikal A. McKinnon and Richard C. Schmitt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Thermomechanical Buckling of Multilayered Composite Plates, Ahmed K. Noor and Jeanne M. Peters, EM Feb. 92, p351-366.

Three-Dimensional Solutions for Thermal Buckling of Multilayered Anisotropic Plates, Ahmed K. Noor and W. Scott Burton, EM Apr. 92, p683-701.

Use of Density Current to Modify Thermal Structure of TVA Reservoirs, Vahid Alavian and Pete Ostrowski, Jr., HY May 92, p688-706.

Zunil I Landslide and Landslide Hazard, Gerald R. Thiers, Alan Benfer, Luis Merida and Richard Grass, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p205-221.

## Thermal gradient

Editor's Preface, Richard J. Seymour, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p1-3.

On the Modelling of Damage Due to Volumic Variations in Cementitious Composites, Jacky Mazars and Jean Pierre Bournazel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p482-

Thermal insulation
Aerogel—A Transparent, Porous Superinsulator, Arion J.
Hunt, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p398-403.

p398-403.

Thermal pollution
Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, Andrew Dasinger and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p605-610.

Assessment of Impacts Associated with Alternate Cooling System Designs for an Electric Power Station, Steven H. Wolf, James D. Bowen, Donald P. Galya and Frank S. Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231.

Thermal Discharge Effects on Dissolved Oxygen in an

Thermal Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604.

Thermal power plants
Behavior of Thermal Wedges in Oscillating Reservoir
Flow: A Case Investigation, Vahid Alavian, Neil Sutherland and Ming Shiao, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
Dollimietic.

Optimization of Real-Time Hydrothermal System Opera-tion, William W.-G. Yeh, Leonard Becker, Shi-Qian Hua, De-Pu Wen and Jian-Min Liu, WR Nov./Dec. 92, p636-635.

eservoir Management and Thermal Power Generation, Barbara J. Lence, M. Imran Latheef and Donald H. Burn, WR July/Aug. 92, p388-405.

Burn, W. F. Jury, Vag. 92, p. 286–405.

Thermal properties

Predictions of Thermal Characteristics for Mixed Porous Media, Yueying Deng, Clifford B. Fedler and James M. Gregory, M.T. May 92, pl. 85-195.

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, S. L. Marra, R. E. Edwards and C. M. Jantzen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924.

Thermal resistance

Aerogel—A Transparent, Porous Superinsulator, Arlon J. Hunt, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p398-403.

Thermal stratification
Efficiency of Jet Mixing of Temperature-Stratified Water,
Heinz G. Stefan and Ruochuan Gu, EE May/June 92,
p363-379.

Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604. Thermal Stratification Modeling of Lakes with Sediment Heat Flux, Ting-Kuei Tsay, Gordon J. Ruggaber, Steven W. Effler and Charles T. Driscoll, HY Mar. 92, p407-419.

Thermal stresses Damage Dependent Micromechanics in Metal Matrix Composites, R. H. Jones, D. H. Allen and J. G. Boyd, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p99-102.

M. Niedzwecki, ed., 1992), p99-102.
The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, Marek-Jerzy Pindera and Alan D. Freed, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272.

Effects of Bonding Stiffness on Thermal Stresses in Sandwich Panels, R. Hussein, P. Fazio and K. Ha, AS Oct. 92, p480-490.

Fault Stress Analysis for the Yucca Mountain Site Characterization Project, S. J. Bauer, M. P. Hardy, R. Goodrich and M. Lin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277.

Temperature Dependent Bridge Movements, Shashi Moorty and Charles W. Roeder, ST Apr. 92, p1090-1003.

1105.

1105.
Thermal Analysis for RCC—A Practical Approach, Stephen Tatro and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p389-406.
Thermal Load for p-Version Laminated Elements, Pabitra K. Saha, Nesar U. Ahmed and Gautam Saha, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1059-1062.
Thermal Stresses in Bi-Coated Structures, Mauor, Eerrei

Niedzwecki, ed., 1992), p1093-1062.
Hermal Stresses in Bi-Coated Structures, Mauro Ferrari and Luca Lutterotti, EM Sept. 92, p1928-1938.
Hermal-Structural Analysis Methods for RCC Dams, P. R. Barrett, H. Foadian, R. J. James and Y. R. Rashid, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p407-422.

ed. and Francis G. McLean, ed., 1992), p407-422.

Thermodynamics

Closed Cycle Ocean Thermal Energy Conversion, F. A.
Johnson, (Ocean Energy Recovery: the State of the Art,
Richard J. Seymour, ed., 1992), p70-108.

Effect of Nitrogen on Yield Using Bioenergetics Theory,
R. L. Droste, EE Sept./Oct. 92, p81-4820.

The Influence of Moisture on Air Oxidation of UO<sub>2</sub>: Calculations and Observations, Peter Taylor, Robert J.
Lemire and Donald D. Wood, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1442-1448.

Novel Combined-Cycle Low-Temperature Engine System, Joel H. Rosenblatt, EY Dec. 92, p209-223.

State of the Art in Open-Cycle Ocean Thermal Energy

State of the Art in Open-Cycle Ocean Thermal Energy Conversion, Michel Gauthier, Jean Marvaldi and Federica Zangrando, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p109-151.

Thermodynamic Model of Nitrification Kinetics, Thongchai Yantarasri, Albert Garcia, III. and David Brune, EE July/Aug. 92, p568-584.

Thermoelasticity
Thermal Load for p-Version Laminated Elements, Pabitra K. Saha, Nesar U. Ahmed and Gautam Saha, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1062.

Thermography
Infrared Thermographic Sensing of Sewer Pipeline Problems, Gary J. Weil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), PSP 0-895.

p890-895. Non-Destructive Testing of Bridge, Highway and Airport Pavements, Gary J. Weil, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1121-1128. Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange". John Zachar and Tarun R. Naik, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p107-115.

Thickening

Citical Evaluation of Thickening Theories, Athanasios Papanicolaou and Panayiotis Diplas, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p735-740.

Analysis and Implementation of Thin-Layer Element for Interfaces and Joints, K. G. Sharma and C. S. Desai, EM Dec. 92, p2442-2462.

c.m. Lec. 94, p.2442-2462.

Boundary-Continuous Fourier Solution for Clamped Mindlin Plates, Humayun R. H. Kabir and Reaz A. Chaudhuri, EM July 92, p1457-1467.

Effect of Thickness Distribution on Performance of S-Cambered Profiles, Baby Chacko, V. Balabaskaran, E. G. Tulapurkara and P. A. Aswathanarayana, EY Dec. 92, p164-179.

Fundamental Frequency of Tapered Plates by Differential Quadrature, Anant R. Kukreti, Jalaleddin Farsa and Charles W. Bert, EM June 92, p1221-1238.

Intermediate Level Waste Transport Shielding Study, M. H. Dean, L. S. Grindrod, S. M. Jones and R. W. T. Sievwright, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2062-2068.

Mechanics of Shape Optimization in Plate Buckling, Mahesh D. Pandey and Archibald N. Sherbourne, EM June 92, p1249-1266.

Thin shell structures

This shell structures
Axisymmetric Buckling of Pressure-Loaded Spherical
Caps, Paulo B. Gonçalves and James G. A. Croll, ST
Apr. 92, p970-985.
Buckling of Pressurized Axisymmetrically Imperfect Cylinders Under Axial Loads, Jim-Guang Teng and J. Michael Rotter, EM Feb. 92, p229-247.
Load Shortening in Plastic Buckling of Cylinders,
Marwan El-Bkaily and Ralf Poek, EM Sept. 92, p18921906.

Response Variability of Structures Subjected to Bifurca-tion Buckling, G. V. Palassopoulos, EM June 92, p1164-1183.

Thin wall section

Thin wall sections
Flexural-Torsional Stability of Thin-Walled Columns,
Juha Paavola and Seppo Salonen, EM Dec. 92, p2384-

Free Vibration Analysis of Curved Thin-Walled Girder Bridges, Chang-Huan Kou, Steven E. Benzley, Jian-Yuan Huang and D. Allan Firmage, ST Oct. 92,

nsitivity Analysis of Thin-Walled I-Beams Resting on Elastic Foundation, B. B. Budkowska and C. Szymc-zak, EM June 92, p1239-1248.

Short-Term Behavior of Pultruded Fiber-Reinforced Plastic Frame, Ayman S. Mosallam and Lawrence C. Bank, ST July 92, p1937-1954.

Stiffness Matrix for Nonlinear Analysis of Thin-Walled Frames, Aura Conci, EM Sept. 92, p1859-1875.

Thin wall structures

Experimental Investigation of Bending and Twisting Coupling in Thin-Walled Composite Beams, Lawrence C. Bank and Steven J. Smith, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p884-887.

1992), p884-887.
Finite Element Analysis of Thin-Walled Curved Beams Made of Composites, G. S. Palani and Sundaramoorthy Rajasekaran, ST Aug. 92, p2039-2062.
The Generalized Brazier Problem for Orthotropic Straight Tubes of Finite Length, C. W. Bert and A. Libai, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p872-875.

Local and Interaction Buckling of Polygonal Section Steel Columns, Yasuhiro Migita, Tetsuhiko Aoki and Yuhshi Fukumoto, ST Oct. 92, p2659-2676.

Yunsan Fukumoto, S1 Cet. 24, p.2639-2676.
Tests of Cold-Formed Channels with Local and Distortional Buckling, Young B. Kwon and Gregory J. Hancock, ST July 92, p.1786-1803.
Thin-Walled Multicell Box-Girder Finite Element, A. Ghani Razaqpur and Hangang Li, ST Oct. 91, p.2953-2021.

Thin-Walled Space Frames. I: Large-Deformation Analysis Theory, Hong Chen and George E. Blandford, ST Aug. 91, p2499-2520.

Three-dimensional analysis
3D Analyses of Complex Buildings on Micros, Istvan
Kadar and Ricardo A. A. Todeschini, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), p551-557.

3D Frequency Domain Analysis of Offshore Structures, J. F. McNamara and M. Lane, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p192-195.

1992), p192-195.
3D Inelastic Dynamic Analysis of RC Structures, Roy F. Lobo, Sashi K. Kunnath and Andrei M. Reinhorn, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p905-912.
The Control of Large Amplitude Liquid Sloshing with Moving Baffles, T. C. Su and Y. X. Wang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p208-211.
Generalized Three-Dimensional Slope-Stability Analysis, Dov Leshchinsky and Ching-Chuan Huang, GT Nov. 92, p1748-1764.

easurement of Deformations in Buried Pipeline, W. F. Teskey, D. A. Bayly and I. R. Colquhoun, SU Feb. 92,

pl-10.

Minimal Storage Finite Element Solution of Large-Scale
Three-Dimensional Elastodynamic Problems, S. Hassanzadeh, S. Foresti, H. Murakami and V. Sonnad,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p762-769.

The Superposition Approach to Pile Group Dynamics, H. El-Marsafawi, A. M. Kaynia and M. Novak, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p114-135.

p114-133.

Three-Dimensional Analytical Techniques for Assessing Overburden Toxicity as a Decision-Making Tool for Reclaimability Determinations, L. A. Parsons, K. Kirk and A. Wilhelm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p839-845.

Three-Dimensional Fracture Process Zone Detection in Concrete, K. D. Basham, Y. C. Jean and K. P. Chong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p401-404.

Three-Dimensional Seismic Analysis of La Villita Dam, A.-W. Elgamal, GT Dec. 92, p1937-1958.

Three-Dimensional Solutions for Thermal Buckling of Multilayered Anisotropic Plates, Ahmed K. Noor and W. Scott Burton, EM Apr. 92, p683-701.

Three-dimensional flow
Numerical Modeling of Flow and Transport Phenomena
in a Fractured Rock and Its Calibration Process, A. Ko-bayashi, R. Yamashita and Y. Moro, (High Level Radi-oactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992), p695-703.

Observations on Flow Around Bridge Piers, Ferdous Ahmed and Nallamuthu Rajaratnam, (Hydraulic Englemeering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p834-839.

BROWNIK, ed., 1992), p8:34-839.

A Semi-Implicit Finite Difference Model for Three-Dimensional Tidal Circulation, Vincenzo Casulli and Ralph T. Cheng, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p620-631.

three-Dimensional Incompressible Flow Calculations with MacCormack's Method, Robert S. Bernard and Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 2210-2226.

p219-224.

Three-dimensional models
3D Hydrodynamic Model Validation Through Simulations of Dynamic Processes, Leif H. Slordal, Eivind A. Martinsen and Alan F. Blumberg, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p525-537.

3-D Modelling of Heat Discharge from Ul-Jin Power Plant into Coastal Waters of Korea East Sea, Young Jae Ro, Tae In Kim, Ha Keun Sung and Suk Woo Lee, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p501-512.
3-D Particle Tracking for the New York Bight, Raymond

S. Chapman and Mark S. Dortch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.26-35.

Application of a Boundary Fitted Coordinate Mass Transport Model, Daniel L. Mendelsohn and J. Craig Swanson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed. Ralph Cheng, ed. and Craig Swanson, ed., 1992), p382-404.

Application of Three-Dimensional Lagrangian Residual Transport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, HY June 92, p831-848.

Methods, Guus S. Stelling and Jan J. Leendertse, (Estu-arine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p771-782.

Assessing Cu(II) Speciation and Transport in the New York Bight, A. B. M. Badruzzaman and Wu-Seng Lung. (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), P476-488. Cleanup of a HLW Nuclear Fuel Reprocessing Center Using 3-D Database Modeling Technology, Robert C. Sauer. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p859-868. Computation of Long-Term Three-Dimensional Hydrodynamics of New York Bight, Keu W. Kim, David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p500. Construction Applications of Relational Data Bases in Three-Dimensional GIS, Amr A. Oloufa, C. S. Papacostas and Reynaldo Espino, CP Jan. 92, p72-84. Data Set for Verification of 3-D Free-Surface Hydrodynamic Models, Carquinez Strait, California, P. E. Smith, R. N. Oltmann and M. R. Simpson, (Hydraulic Engineering: Saving a Threatend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p430-435.

Effects of Wind on Circulation in Los Angeles-Long Beach Harbors, William C. Seabergh and S. Rao Venulakonda, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), Stuarine Environmental Impact Assessment Using a

p551-563.

585

p531-363. Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303. Model for Three-Dimensional Flower Actions of the Company of the Co

berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

A Finite Element Model for Three-Dimensional Flows Along the West Coast of Vancouver Island, M. G. G. Foreman, R. E. Thomson, D. R. Lynch and R. A. Walters, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p574-585.

Highway Design in 3-D, Richard D. Sullivan, CE June 92, p68-70.

The Hopscotch Algorithm for Three-Dimensional Simulation, Geneviève Ségol, HY Mar. 92, p385-406.

Methodology for Validation of a Tampa Bay Circulation Model, Kurt Hess and Kathryn Bosley, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p83-94.

Model Development for Operational Use to Help Spill Combating and Sea Rescue, Heimo Vepsä, Erkki Alassarela and Juha Sarkkula, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p83-94.

Modeling 3-D Circulation Using the DSS Technique, R. A. Luettich, Jr., S. Hu, J. J. Westerink and N. W. Scheffher, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Reigh Cheng, ed. and Craig Swanson, ed., 1992), p63-2-643.

A Modified Adjoint Method for Inverse Eddy Viscosity

Scheffner, (Estuarine and Coastal modeling, manoini L. Spaulding, ed., keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p632-643.

A Modified Adjoint Method for Inverse Eddy Viscosity Estimation for Use in Coastal Circulation Models, John E. Richardson and Vijay G. Panchang, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p733-745.

New Approaches for Regional Ground-Water Modeling in Southern Nevada, A. Keith Turner and Kenneth E. Kolm. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p852-858.

New Tools to Aid in Scientific Computing and Visualization, Michael G. Wallace and Tracy L. Christian-Frear, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p462-468.

Numerical Model Verification by Prescribed Solution Forcing—A Test Case, Dick P. Dee, F. Mauricio Toro and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p416-421.

Numerical Simulation of Tidally Induced Three-Dimensional Hydrodynamics of New York Bight, K. W. Kim, N. W. Scheffner, D. J. Mark and B. H. Johnson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p466-475.

A Numerical Study of Kinematics of Nonlinear Water Waves in Three Dimensions, Hongbo Xü and Dick K. P. Yue, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p81-98.

Preliminary Circulation Simulations in Apalachicola Bay, T. S. Wu and W. K. Jones, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p344-356.

Rate-Dependent Plasticity Representation for Energy-Absorbing Materials, Q. H. Zuo, A. K. Maji, M. K. Neilsen and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutles, ed. and John M. Niedzwecki, ed., 1992), p151-154.

Release Alternatives on a 3-D Salinity Simulation, Bernard B. Hsieh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-242.

Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-242.

Sensitivity of Flow and Salt Transport to Uncertainties at Open Boundaries: A 3-D Experience, Bernard B. Hsieh and Billy H. Johnson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p720-732.

Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Seasonal Timescale, Eugene J. Wei, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p430-440.

Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Annual Timescales, Richard A. Schmalz, Ir., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p441-452.

Strategies for Groundwater Model Application Through GIS, David S. Ward, Robert M. Greenwald and P. Srinivasan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p32.

Techniques for Visualization of Estuarine and Coastal Flow Fields, S. E. Rennie and J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p48-55.

Thirty Year Simulation of Chesapeake Bay Eutrophication, Carl F. Cerco and Thomas M. Cole, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p38-17.

Three Dimensional Modeling of Watershed Hydrology, M. N. Saquib and M. L. Kavvas, (Water Resourcer Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-1396.

Three Dimensional Eulerian-Lagrangian Transport Model, A. K. M. Quamrul Ahaan and M. S. Bruno, (Evil Engineering in the Oceans V, Robert

1992), p637-651.

Three-Dimensional Eulerian-Lagrangian Transport Model, A. K. M. Quamrul Ahsan and M. S. Bruno, (Extuarine and Coastal Modeling, Maicolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p1-12.

Three-Dimensional Finite Element Modelling of Near-Field Contaminant Transport in a Nuclear Fuel Waste Disposal Vault, Tin Chan and Frank Stanchell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p297-303.

A Three-Dimensional Tidal Circulation Model Based on Semi-Implicit Finite-Difference Methods, Ralph T. Cheng and Vincenzo Casulli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p428-429.

Tuned Mass Dampers for Balcony Vibration Control, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p723-740.

p723-740.

p723-740.

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, T. L. Clark, R. T. Bruintjes and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p606-611.

Using Component Mode Synthesis and Static Shapes for Tuning TMDs, Mehdi Setarch, Robert D. Hanson and Ralf Peck, ST Mar. 92, p763-782.

Verification of a 3-D Hydrodynamic Numerical Model,

Rail Feek, S1 Mar. 92, p105-782.
Verification of a 3-D Hydrodynamic Numerical Model, David Daniel Abraham, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p225-230.

1992, p2c3-230.
Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

1992), p422-427.

Fixed-End Moments and Thrusts of Planar Curved Beams, Tung-Ming Wang and Theodore F. Merrill, ST Jan. 92, p324-331.

Tidal currents

Application of Three-Dimensional Lagrangian Residual Transport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, HY June 92, p831-848.

Iransport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, HY June 92, p831-848.

Experiments with a Terrain-Following Hydrodynamic Model for Cobscook Bay in the Gulf of Maine, David A. Brooks and Laurice U. Churchill, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed. Ralph Cheng, ed. and Craig Swanson, ed., 1992), p215-226.

A Numerical Model Simulation of Tidal Currents in Long Island and Block Island Sounds, L. Charles Sun, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raph Cheng, ed. and Craig Swanson, ed., 1992), p513-524.

Numerical Simulation of Tidal Flow in Shallow Water Bay by Finite Difference Method, Xiaoyong Zhan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p684-693.

Open Boundary Condition for Multiple Level Fe Tidal Current Flow Analysis, Toshio Kodama and Mutsuto Kawahara, (Hydraulic Engineering: Saving a Threatend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p442-447.

Tide- and Wind-Driven Flushing of Boston Harbor, Masachusetts, Richard P. Simell (Estuarine and Coastal

nings, eu. and Nani G. Bhowmik, ed., 1992), p442-447. Tide- and Wind-Driven Flushing of Boston Harbor, Mas-sachusetts, Richard P. Signell, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p594-606.

Tidal effects

Los Angeles-Long Beach Harbors Model Enhancement Program, William C. Seabergh, S. Rao Vemulakonda and James Rosati, III., (*Ports '92*, David Torseth, ed., 1992), p884-897.

Modelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, N. Jothi Shankar, H. F. Cheong and C. T. Chan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), ed. 656 659. p669-683.

p069-683. Simulation of Tidally Induced Three-Dimensional Hydrodynamics of New York Bight, K. W. Kim, N. W. Scheffner, D. J. Mark and B. H. John-son, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p466-475

South Jetty Scour Hole Stabilization, Ocean City, Maryland, Gregory P. Bass and Edward T. Fulford, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p583-597.

Stage-Discharge Relationship in Tidal Rivers, N. El-Jabi, G. Wakim and S. Sarraf, WW Mar./Apr. 92, p166-174.

Tidal Influence on the Stratification of the Miramichi Estuary, A. St-Hilaire, C. Bettignies, D. Booth and E. M. P. Chadwick, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p953-958.

Tidal energy

Economics of Tidal Power, T. L. Shaw, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p34-41.

Editor's Preface, Richard J. Seymour, (Ocean Energy Re-covery: the State of the Art, Richard J. Seymour, ed., 1992), p1-3.

Facilitating Technology for Electric Power Generation, Ian Pope, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p276-292.
New Technology Applicable to Tidal Power, G. C. Baker, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p42-69.

Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992, 0-87262-894-9, 313pp.

The State of the Art in Tidal Power Recovery, J. Gavin Warnock and Robert H. Clark, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p4-33.

Tidal hydraulics

57 Years of Coastal Engineering Practice at a Problem Inlet: Indian River Inlet, Delaware, Jeffrey A. Gebert, Keith D. Watson and Augustus T. Rambo, (Coastal En-gineering Practice '92, Steven A. Hughes, ed., 1992), p503-519.

p303-319.

Data Set for Verification of 3-D Free-Surface Hydrodynamic Models, Carquinez Strait, California, P. Esmith, R. N. Oltmann and M. R. Simpson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p430-435.

Proceed of Thickness Distribution on Performance of Secret of Thickness Distribution of of Thickness

Effect of Thickness Distribution on Performance of S-Cambered Profiles, Baby Chacko, V. Balabaskaran, E. G. Tulapurkara and P. A. Aswathanarayana, EY Dec. 92, p164-179.

92, p104-179.
Impact of Breakwater Removal on Hydrodynamics and Water Quality in Flushing Bay, New York, Frederick E. Schuepfer, Guy A. Apicella and Les Kloman, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), p694-706.
Lagrangian Solution of St. Venant's Equations for Alluvial Estuary, Hubert H. G. Savenije, HY Aug. 92, p1153-163.

Model for Estimating Tidal Flushing of Small Embayments, Lawrence P. Sanford, William C. Boicourt and Stephen R. Rives, WW Nov./Dec. 92, p635-654.
Network Applications of the USGS Branch Model, Raymond W. Schaffranck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), a1150-1169. p1159-1164.

Pine Creek Tidal Hydraulic Study, James G. MacBroom and Edward Hart, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1154-1158.

Rapidly Varied Flow Analysis of Undular Bore, Rodney J. Sobey and Maarten W. Dingemans, WW July/Aug. 92, p417-436.

ps17-350.
 A Three-Dimensional Tidal Circulation Model Based on Semi-Implicit Finite-Difference Methods, Ralph T. Cheng and Vincenzo Casulli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p428-429.

Tidal Model Using Method of Characteristics, Panayis-Fokion C. Matsoukis, WW May/June 92, p233-248.

Continuum Model for Flows in Emergent Marsh Vegeta-tion, Lisa C. Roig and Ian P. King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed. Ralph Cheng, ed. and Craig Swanson, ed., 1992), p268-279.

Tidal power generations

Economics of Tidal Power, T. L. Shaw, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p34-41.

The State of the Art in Tidal Power Recovery, J. Gavin Warmock and Robert H. Clark, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p4-33.

Tidal power plants

New Technology Applicable to Tidal Power, G. C. Baker,

(Ocean Energy Recovery: the State of the Art, Richard J.

Seymour, ed., 1992), p42-69.

Tidal waters
Application of Three-Dimensional Lagrangian Residual Transport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, Hy June 92, p831-848.
DYNLETI: Network Model for Tidal Inlet Dynamics, Michael Amein and Nicholas C. Kraus, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., kelt Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p644-656.
An Engineering Assessment of Hydrodynamics and Beach

Craig Swanson, ed., 1992), p644-656.
An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, Monica A. Chasten and Millard W. Dowd, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p520-536.
A Semi-Implicit Finite Difference Model for Three-Dimensional Tidal Circulation, Vincenzo Casulli and Ralph T. Cheng, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p620-631.
Simple Conceptual Ernlanation of Down-Drift Offset In-Simple Conceptual Ernlanation of Down-Drift Offset In-

Simple Conceptual Explanation of Down-Drift Offset In-lets, Scott L. Douglass, WW Mar./Apr. 91, p136-142. Stage-Discharge Relationship in Tidal Rivers, N. El-Jabi, G. Wakim and S. Sarraf, WW Mar./Apr. 92, p166-174.

Tide and Storm Surge Predictions Using Finite Element Model, J. J. Westerink, R. A. Luettich, A. M. Baptista, N. W. Scheffner and P. Farrar, HY Oct. 92, p1373-1390.

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Design Procedures for Effluent Discharge to Estuaries During Ebb Tide, Tony Webb and Rodger B. Tomlin-son, EE May/June 92, p338-362.

son, E.E. May/June 92, p.33-962. Effects of Wind on Circulation in Los Angeles-Long Beach Harbors, William C. Seabergh and S. Rao Vemulakondu, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), ed. 551-554. p551-563.

p331-393.

Experiments with a Terrain-Following Hydrodynamic Model for Cobscook Bay in the Gulf of Maine, David A. Brooks and Laurice U. Churchill, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p215-226.

Craig Swanson, ed., 1992, p.17-220.

Hydraulic Controls on Delaware Estuary Water Quality, Joseph L. DiLorenzo, Georgia R. Marino, Poshu Huang, Tavit O. Najarian and M. Liewellyn Thatcher, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p151-157.

Longitudinal Dispersion Coefficients in Estuary, I. Guymer and J. R. West, HY May 92, p718-734.

Model for Estimating Tidal Elushing of Small Embay.

mer and J. R. West, HY May 92, p718-734.

Model for Estimating Tidal Flushing of Small Embayments, Lawrence P. Sanford, William C. Boicourt and Stephen R. Rives, WW Nov./Dec. 92, p635-654.

Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), p357-369.

p337-309.

A Numerical Model Simulation of Tidal Currents in Long Island and Block Island Sounds, L. Charles Sun, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ratph Cheng, ed. and Craig Swanson, ed., 1992), p513-524.

A Predictive Model of the Currents in Cleveland Bay, Brian King, [Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p746-758.

The State of the Art in Tidal Power Recovery, J. Gavin Warnock and Robert H. Clark, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p4-33.

Tidal Model Using Method of Characteristics, Panayis Fokion C. Matsoukis, WW May/June 92, p233-248.

Tide and Hurricane Storm Surge Computations for the Western North Atlantic and Gulf of Mexico, Joannes J. Westerink, Julia C. Muccino and Richard A. Luettich, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p538-550.

Tides, astroe

Tides, astronomical Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Seasonal Timescale, Eugene J. Wei, (Estuarine and Coastal Modeling, Malcolm L. Spauld-ing, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p430-440.

Tieback restraint system

Design of Tied-Back Walls for Seismic Loading, Thomas J. Siller and Matthew O. Dolly, GT Nov. 92, p1804-

Permanent Excavation Support and Underpinning in Sands: A Case History, Russell J. Morgan, Lawrence F. Johnsen and Franklin M. Grynkewicz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p778-700.

Slope Stabilization at the Forks of Butte Project, Stephen J. Klein and David K. Hughes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p905-922. Tying Back a Landstide, Stephen J. Klein, CE Dec. 92, p40-43.

Analytical Moment-Curvature Relations for Tied Concrete Columns, Shamin A. Sheikh and C. C. Yeh, ST Feb. 92, p529-544.

Computer Graphics in Detailing Strut-Tie Models, Abdulsalam Alshegeir and Julio Ramirez, CP Apr. 92, p220-232.

# Tiltmeters

Site Qualification for Inclinometer Surveyng Using Tiltmeters, Howard Egan, Gary R. Holzhausen and Dan Sampson, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551.

Timber construction Clean Waters Taking a Toll on Timber Structures, CE Mar. 92, p28-29.

Design Charts for Timber Beam-Columns, Ramon Rib Ramirez and Mehrdad Soltani, ST Feb. 92, p596-602. Foliente and

Design of Notched Wood Beams, Greg C. Fol Thomas E. McLain, ST Sept. 92, p2407-2420. Howe Truss Behavior Interpreted by Deflections, Zbig-niew Cywiński, Marek Jasina and Stefan Niewitecki, CF Aug. 92, p151-160.

Hygrothermal Effects on Load-Duration Behavior of Structural Lumber, Kenneth J. Fridley, R. C. Tang, Lawrence A. Soltis and Chai H. Yoo, ST Apr. 92, Lawrence A p1023-1038

International Harmonization of Reliability-Based Timber Engineering Design Codes, Jozzef Bodig, Michael Caldwell and Ronald W. Anthony, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-86.

cu., 1972, p82-80.
Load Duration and System Effects in LRFD for Wood Construction, David V. Rosowsky and Bruce R. Ellingwood, (Probabilistic Mechanics and Structural and General Reliability, Y. K. Lin, ed., 1992), p78-81.
Prestress Level in Stress-Laminated Timber Bridges, Edward F. Sarisley and Michael L. Accorsi, ST Nov. 90, p3003-3019.

Reliability-Based Specification for Engineered Wood Construction, James R. Goodman, Allan G. Burk and David G. Pollock, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p73-77.

Strength and Efficiency of Wood Box Columns, D. B. Van Dyer, ST Mar. 92, p716-722.

Strength of Lag-Screw Connections, Thomas E. McLain, ST Oct. 92, p2855-2871.

Structural Performance of Hardwood-Metal Composite Beams, Robert H. Kim and Jai B. Kim, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p718-731.

Timbers Clear-Span Timber Bridge Completed in Japan, CE Nov. 92, p28.

Behavior Model for Structural Lumber, Kenneth J. fley, R. C. Tang and Lawrence A. Soltis, ST Aug. Fridley, R. C. T 92, p2261-2277.

92, p.2261-2277.

Effects of CCA Treatment and Drying on Tensile Strength of Lumber, J. E. Winandy, H. M. Barnes and P. H. Mitchell, MT Aug. 92, p.240-251.

Load-Duration Effects in Structural Lumber: Strain Energy Approach, Kenneth J. Fridley, R. C. Tang and Lawrence A. Soltis, ST Sept. 92, p.2351-2369.

Method for Simulating Tension Performance of Lumber Members, Steven M. Cramer and William B. Fohrell, ST Oct. 90, p.2729-2746.

Timber Crib-Faced Soil-Nailed Retaining Wall, James G. Collin, Mohammed A. Gabr and Alan G. MacKinnon, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p.1457-1463.

Time dependence
Analysis of Corroded Reinforced Concrete Sections for
Repair, Ying-Su Yuan and Marton Marosszeky, ST
July 91, p2018-2034.
Composite Beams with Partial Interaction under Sustained Loads, Mark Andrew Bradford and R. Ian Gibbert, ST July 92, p1871-1883.
Computation of Turbulent Shear Flow Over Surface
Mounted Obstacle, Jiamming He and Charles C. S.
Song, EM Nov. 92, p2282-2297.
Creen Effects in Composite Reams with Flexible Shear

Song, EM Nov. 24, p2282-2297.

Creep Effects in Composite Beams with Flexible Shear Connectors, Angelo Marcello Tarantino and Luigino Dear, ST Aug. 92, p2063-2081.

Efficiency Formula for Pile Groups, Sayed M. Sayed and Reda M. Bakeer, GT Feb. 92, p278-299.

Reda M. Bakeer, GT Feb. 92, p278-299.
FE Analysis of Time-Dependent Instability of Cut Slopes in Clay Shale, Nobuyuki Yoshida and Toshihisa Adachi, (Stability and Performance of Slopes and Embaniements II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p429-444.
Generalized Creep and Stress Relaxation Model for Clays, Ronaldo I. Borja, GT Nov. 92, p1765-1786.
Load-Space Formulation for Time-Dependent Structural Reliability, R. E. Melchers, EM May 92, p833-870.
Reliability, Analysis of Creep and Shrinkage Effects, C. Q. Li and R. E. Melchers, ST Sept. 92, p2323-2337.
Sampling Techniques for Time-Variant Reliability Problems, R. E. Melchers, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p100-103. 1992), p100-103.

1992), p100-103.

Shrinkage Measurements in Composite Beam Slabs, Iyad Alsamsam, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p215-225.

Space-Time Characterization for Resource Management on Construction Sites, Iris D. Tommelein, Juan G. Castillo and Pierrette P. Zouein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p623-630.

Study of Time-Dependent Local Scour Around Bridge Piers, A. Melih Yanmaz and H. Doğan Altınbilek, HY Oct. 91, p1247-1268.

Time Domain Analysis of Dynamically Loaded Single Piles, S. M. Mamoon and P. K. Banerjee, EM Jan. 92,

Time factors
Aspects of Road-Accident Death Analyses, John C.
Golias and Helen S. Tzivelou, TE Mar./Apr. 92, p299-

Change Intervals and Lost Time at Single-Point Urban Interchanges, James A. Bonneson, TE Sept./Oct. 92, p631-650.

The Mechanical Aging of Soils, John 'H. Schmertmann, GT Sept. 91, p1288-1330.

GT Sept. 91, p.1288-1330.

Modeling Monsoon-Affected Rainfall of Pakistan by Point Processes, Thian Yew Gan and Zahoor Ahmad, WR Nov. 20ce. 92, p.671-688.

Statistical Properties of Construction Duration Data, Simaan M. Aboukizk and Daniel W. Halpin, CO Sept. 92, p.525-544.

Time-Viscosity Relationships of Newtonian and Binghamian Grouts, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p663-675.

Time series analysis
Adaptive Parameter Estimation for Multisite Hydrologic
Forecasting, Haitham M. Awwad and Juan B. Valdes,
HY Sept. 92, p1201-1221.

Habitat Simulation in United States, Britain, and France, Robert T. Milhous, Ian Johnson, Yves Souchon and Sylvie Valentin, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search Solutions, Mohammad Karamouz, ed., 1992), p362-

Recurrence Interval of Geophysical Events, Hugo A. Loaiciga and Miguel A. Mariño, WR May/June 91, p367-382.

p367-382.

Robust Approach to Wave Runup Calculation, Todd L.

Walton, Jr., (Coastal Engineering Practice '92, Steven
A. Hughes, ed., 1992), p87-891.

Salinity of Rivers: Transfer Function-Noise Approach,
Dolores Quílez, Ramón Aragiés and Kenneth K. Tanji,
IR May/June 92, p34-3-359.

Specifying the Offshore Environment, George Z. Forristall, (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p1-41.

Stepwise Disaggregation Scheme for Synthetic Hydrology, Emidio G. Santos and Jose D. Salas, HY May 92,
p765-784.

Stochastic Time-Series Representation of Wave Parts.

ochastic Time-Series Representation of Wave Data, Norman W. Scheffner and Leon E. Borgman, WW July/Aug. 92, p337-351.

Janyraug, 22, p337-331.
Time Series Prediction Using Neural Networks, James Villarreal and Paul Baffes, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p268-282.

Time space scheduling
Space-Time Characterization for Resource Management
on Construction Sites, Iris D. Tommelein, Juan G. Castillo and Fierrette P. Zouein, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p623-630.

City to Inspectors: Get Back to Work, CE Oct. 92, p8.

Effect of Tire Parameters on Pavement Damage and Load-Equivalency Factors, Peter E. Sebaaly and Nader Tabatabaee, TE Nov./Dec. 92, p805-819.

Testing Photoelectric Sensor System to Classify Vehicles, J. L. Gattis and Clyde E. Lee, TE May/June 92, p457-

471.

Topography

Evacuation Modeling Near a Chemical Stockpile Site,
Donald E. Newsom, Marc A. Madore and Robert T.
Jaske, (Site Impact Traffic Assessment: Problems and
Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed.
and T. C. Sutaria, ed., 1992), pl 30-184.

Frontal Dynamics and Circulation of the Upper Layer of
a Fjordsystem with Complicated Topography, Harald
Svendsen, Susanne R. Mikki and Lars G. Golmen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding,
ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p523-267.

Topographic Effects on Stormflow Acidity, David
Wolock, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p878-883.

Topsoil Fill-Slope Failure and Repair, Robert W. Day, CF Aug. 92, p161-168.

Taming Tornado Alley, Harold W. Harris, Kishor C. Mehta and James R. McDonald, CE June 92, p77-78.

Comparative Evaluation of Plasticity Theories Against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.236-239.

Comparative Evaluation of Plasticity Theories against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, EM Oct. 92, p2104-2126. Exact Solution for General Torsion Problems Using Boundary Singularities, Omri Rand, EM Oct. 92, p2141-2147.

Flexural-Torsional Stability of Thin-Walled Columns, Juha Paavola and Seppo Salonen, EM Dec. 92, p2384-2400.

2400.

Laboratory Testing of Mechanical Rock Bolts, Koon Meng Chua, Jerry Lovato and Roy Cook, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1055-1058.

Out-of-Plane Strengths of Steel Beams, S. Bild, G. Chen and N. S. Trahair, ST Aug. 92, p1987-2003.

Sensitivity Analysis of Thin-Walled I-Beams Resting on Elastic Foundation, B. B. Budkowska and C. Szymozak, EM June 92, p1239-1248.

Torsional Radiation Damping of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, p1186-1199.

Torsional Stiffness of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, p168-1185.

Aug. 92, p1168-1185.
Torsional Stresses in Tubular Lap Joints with Tapered Adherends, D. Chen and S. Cheng, EM Sept. 92, p1962-1973.

Torsional vibration
Torsional Radiation Damping of Arbitrarily Shaped Embedded Foundations, Shahid Ahmad and George Gazetas, GT Aug. 92, pl 186-1199.

Steering Clear of Tort Claims, Daniel S. Turner and Joseph D. Blaschke, CE July 92, p54-56.

Tort Reform and Design Professional, Dennis R. Schapker, El July 90, p258-265.

Toughness
Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, S. Mebarkia and C. Vipulanandan, MT Feb. 92, p91-105.

Fracture Analysis of Mortar-Aggregate Interfaces in Concrete, Kwang Myong Lee, Oral Buyukozturk and Ayad Oumera, EM Oct. 92, p2031-2047.

Microcrack Interaction Toughening in Ceramics and CMCs, Vistasp M. Karbhari, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1016-1019.

Normal- and High-Strength Fiber-Reinforced Concrete under Compression, A. Samer Ezeldin and Perumal-samy N. Balaguru, MT Nov. 92, p415-429.

Towers
The Crown and the Curtain Wall, Dudley G. McFarquhar, CE Aug. 92, p62-65.
Double Diamonds: New Brand for a Texas Bridge, Thomas G. Lovett and Dennis W. Warren, CE Apr. 92, p42-45.

45.
Dynamic Design of Deepwater Bottom-Founded Towers, Denby Grey Morrison, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p850-889.
The Mother of All Resilient Structures: Fixed-Base Tower in 3000-Foot Water and Some Outstanding Issues, Peter W. Marshall, Susan L. Smolinski and Denby G. Morrison, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p258-272.
Schifflerized Angle Struts, Seshu Madhava Rao Adluri, Murty K. S. Madugula and Gerard R. Monforton, ST July 92, p1920-1936.
Taking the Lean Out of the Leaning Tower of Pisa?, CE

Taking the Lean Out of the Leaning Tower of Pisa?, CE Jan. 92, p12.

Jan. 92, p12.

Toxic wastes

Air Emissions Testing of Air Toxics at WWTPs, Michael

J. Barboza, (Environmental Engineering: Saving a

Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p79-85.

Developing an Industrial Toxics Management Program,
Kathleen O. Gill and Tatiana Gianella, (Environmental

Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p42-48.

Field Analysis of Contaminated Sediments by Immunoas

asy, Deborah J. Mossman, Cynthia J. Baker, Robin D.

Rodriguez and Thomas L. Feldbush, (Environmental

Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), p110
115.

Just Call Them Superfund-Busters, CE Sept. 92, p11.

Livermore Lab Installs Sewer Diversion Facility, CE July 92, p20-21

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Remote Sensing Zeros in on River Spill, CE Aug. 92, p20. VOCs: The New Effluent, Teresa Austin, CE Mar. 92, p42-45.

Toxicity Benthic Exchange of Toxic Contaminants, Steve C. McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions), Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p386

co. and Nani G. Bnowmik, ed., 1992), p386.

Case History: TRE At a Refinery/Chemical Plant, Carol L. La Breche and Russell S. Dykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p555-560.

City of San Diego—Study of Potable Reuse of Reclaimed Wastewater: Final Results, Ken Thompson, Adam W. Olivieri, Don Eisenberg, Robert C. Cooper, Richard E. Danielson and Lori Pettigrew, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138.

Developing an Industrial Toxics Management Program, Kathleen O. Gill and Tatiana Gianella, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p42-48.

Incineration—Panacea or Pandemic? Harvey W. Rogers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p157-162.

Information Convervation and Retrieval—A Nordic

Information Convervation and Retrieval—A Nordic Nuclear Safety Research Project, Mikael Jensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2202-2206.

Interpreting Dredge Material Bioassay Data—COBIAA, Charles H. Lutz, Thomas M. Dillon, Mark H. Houck and Jeff R. Wright, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p108-113

NonPolar Organics Toxicity in a Municipal Effluent, Carlos H. Victoria-Rueda, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p549-554.

F. FIETCE LINAWCAVET, ed., 1992), p349-554.

Spatial Decision Support System for Toxic Spill Modeling in the Ohio River, Walter M. Grayman, Jason P. Heath and Richard M. Males, Water Resources Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Kartamouz, ed., 1992), p74-78.

State Permit Program and Toxics Individual Control Strategies: A Case Study, Altaf A. Memon, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p561-366.

Stripper Makes Paint Removal Less of a Blast, CE Apr. 92, p85.

92, p85.

Three-Dimensional Analytical Techniques for Assessing Overburden Toxicity as a Decision-Making Tool for Reclaimability Determinations, L. A. Parsons, K. Kirk and A. Wilhelm, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p839-845.

Toxic Metals Reduction Process for Waste Sludge, Joseph G. Rabosky and Kashi Banerjee, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p388-393.

Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, Dennis L. Corwin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p152-157.

Conservative Tracers for the C-Well Hydraulic Testing, Tonya Dombrowski, Gary Coates and Klaus J. Stetzen-bach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1991-1996.

Field Measurements of Tracer Gas Transport Induced by Barometric Pumping, R. H. Nilson, W. B. McKinnis, P. L. Lagus, J. R. Hearst, N. R. Burkhard and C. F. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p710-716.

Gas-Transfer Measurements Using Headspace Analysis of Propane, John R. Thene and John S. Gulliver, EE Nov./Dec. 90, p1107-1124.

Nov. Point Surger Pollution Due to Runoff Over Sandy.

Nov./Dec. 90, p1107-1124.

Non-Point Source Pollution Due to Runoff Over Sandy Soil, D. Payne, C. Richardson, A. D. Parr and K. Janish, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p439-444.

A Novel Tracer Injector for Surface Water Studies, Cynthia J. Baker and Deborah J. Mossman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p410-415.

Passive Dispersive Transport Modelling: Comparison

Passive Dispersive Transport Modelling: Comparison with Experimental Rhodamine Data in the Elbe Estuwith Experimental Robustine Data in the Eithe Early ary, Germany, Joachim Krohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p127-139.

Tracking
3-D Particle Tracking for the New York Bight, Raymond
S. Chapman and Mark S. Dortch, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p26-35.

Tractive forces

Stability of Overtopped Embankment Dams, Ashok K. Chugh, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p414-428.

Traffic
An Accelerated Pavement Testing System, Thomas D.
White, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A.
Eaton, ed., 1992), pl12-124.
Analyzing Fast-Food Drive-Up Window Site Impacts, J.
L. Gatiis, N. Zaman, G. W. Tauxe and R. S. Marshment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphaile and T. C. Sutaria, ed., 1992), pl6-20.
Computerized Solution for Signalized Intersection Service Volumes, James W. Epps, TE July/Aug. 92, p496-516.
Traffic Impact Assessment for Snow Disposal Facilities—Extended Abstract, John P. Braaksma, Ian Lockwood and Juan Salinas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p175-179.

Traffic Impact Fees in Schaumburg, Illinois, Thomas J. Dabareiner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), pl 70-174.

Traffic accident analysis
Estimating Accident Benefits of Reduced Freeway Congestion, Edward C. Sullivan, TE Mar./Apr. 90, p167-

Procedures for Estimating Accident Reductions on Two-Lane Highways, Rahim F. Benekohal and Asma M. Hashmi, TE Jan./Feb. 92, p111-129.

Traffic accidents
Estimating Accident Benefits of Reduced Freeway Congestion, Edward C. Sullivan, TE Mar./Apr. 90, p167-180.

180. Identification of Inappropriate Driving Behaviors, John M. Mason, Jr., Kay Fitzpatrick, Deborah L. Seneca and Thomas B. Davinroy, TE Mar./Apr. 92, p281-298. Procedures for Estimating Accident Reductions on Two-Lane Highways, Rahim F. Benekohal and Asma M. Hashmi, TE Jan./Feb. 92, p111-129.

Traffic analysis

The Application and Use of impact Fees: Legal Issues, Charles L. Siemon, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p.238-243. Are Existing Traffic Methodologies Realistic? Nelson B. Nuckles, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.211-216.

Arizona's Uniform Traffic Impact Procedures, Peter M. Lima and Eric Kalivoda, (Site Impact Traffic Assess-ment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p94-

oreulation Issues and Impacts—Corridor Redevelopment Santa Ana, CA—A Case Study, T. C. Sutaria and Abi Mogharabi, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1923, p.223-227. Computerized Transportation Planning Models for Site Impact Analysis: Precision or Complexity? Edward A. Mierzejewski and Timothy Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.128-132. Defining Traffic Impacts of Redevelopment, Peter M. Zabierek, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.195-199. Development Impact Assessment with Transportation Models, John Loper and Robert C. Haziett, Jr., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.233-237. The Dialogue of Players on the Development Stage, Barbara Barnow, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.200-204. Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Morrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.195-210. The Foundation for a Successful Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.11-15. ICU—A Method of Analyzing Signalized Intersections, Weston S. Pringle and Robert W. Crommelin, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.13-13-13. Iste Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.13-13-13. Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed.,

Traffic Impact Study for a Regional Shopping Center at a Basque City. A European View, Mikel Murga, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p84-88.

Traffic Impact Study, Ingerdiging, Peter A. Terry, (Site

Sularia, ed., 1972, pot-os.
Traffic Impact Study Ingredients, Peter A. Terry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p217-222.

Susaria, ed., 1792, p21 1-222.
Transportation Management in the Anacostia Waterfront Washington, D.C. Louis J. Slade, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p159-163.

1992), p159-163.
Trends in Published ITE Trip Generation Rates, C. Richard Keller, Jay E. Sherin and Michael C. Connor, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p32-36.
Uniform Traffic Impact Assessment Studies—A Case History of Riverside County, California, Lawrence A. Toerper, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p114-117.
The Use of Road Impact Tees in the United States, James

and T. C. Sutaria, ed., 1992), p114-117. The Use of Road Impact Fees in the United States, James C. Nicholas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p164-169. Using Traffic Network Models to Assess Site Impact Traffic, Steven B. Colman and Michael N. Aronson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p118-122.

T. C. Sutaria, et., 1992, p.110-122.

Traffic assignment

Corridor Planning and Traffic Assessment: Small Sites and Neighborhoods, Marsha Anderson and Diane Simpson-Colebank, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p.190-194.

A Software Utility for Regional Evacuation (SURE), Mohan M. Venigalla and Ajay K. Rathi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p.25-32.

Traffic capacity
Computerized Solution for Signalized Intersection Service Volumes, James W. Epps, TE July/Aug. 92, p496-

Flow Rates at Signalized Intersections Under Cold Win-ter Conditions, Jan L. Botha and Thomas R. Kruse, TE May/June 92, p439-450.

Saturation Flow and Capacity of Shared Permissive Left-Turn Lane, Feng-Bor Lin, TE Sept./Oct. 92, p611-630. Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, 0-8726-870-1, 236pp.

Traffic characteristics

Trainic characteristics
GIS for Transportation and Air Quality Analysis, Reginald R. Souleyrette, Shashi K. Sathisan, David E. James and Soon-tin Lim, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p182-194.
Vehicle Classification Using Infrared Image Analysis, Yean-Jye Lu, Yuen-Hung Hsu and Xavier Maldague, TE Mar./Apr. 92, p223-240.

Traffic congestion

Access Management—Myth or Reality, Herbert S. Levinson and Frank J. Koepke, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p62-

Application of Traffic Engineering Concepts to Pleasure Boat Traffic, Russell H. Boudreau, Michael C. Leue and James R. Walker, (*Ports '92*, David Torseth, ed., 1992), p248-262.

Commuter Infiltration, The Unaddressed Issue, Thomas J. Boyd and T. C. Sutaria, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p67-

Estimating Accident Benefits of Reduced Freeway Congestion, Edward C. Sullivan, TE Mar./Apr. 90, p167-180.

HOV Lessons, Katherine F. Turnbull and Dennis Chris-tiansen, CE Sept. 92, p74-75.

Neo-Traditional Neighborhoods: A Solution to Traffic Congestion? John R. Stone and Charles A. Johnson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p72-76.

Reexamination of Directional Distribution of Highway Traffic, Satish C. Sharma and Awadhesh K. Singh, TE Mar/Apr, 92, p323-337.

San Francisco Bay Area's Experience Developing Transportation Control Measures for Air Quality Plans, Thomas Perardi, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p56-63.

Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A Highway Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p14-29.

p14-29.
Traffic control
Advanced Software Design and Standards for Traffic Signal Control, Darcy Bullock and Chris Hendrickson, TE
May/June 92, p430-438.
The Clean Air Act: Opportunities for the Transit Industry, Sarah Siwek, Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-75.
Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of 1990, Ronald J. Rogeraburk, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-55.
Knowledge-Based System for Design of Signalized Intersections, J. S. Linkenheld, R. F. Benekohal and J. H. Garrett, Jr., TE Mar-Apr. 92, p241-257.
Learning Rules for Driving Scenarios for an Urban Rail Corridor with Closely Spaced Stations, S. Khasnabis, T. Arciszewski and S. Khurshidul Hoda, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p983-990.
San Francisco Bay Area's Experience Developing Trans-

ed., 1992), p983-990.

San Francisco Bay Area's Experience Developing Transportation Control Measures for Air Quality Plans, Thomas Perardi, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p56-63.

Summary of Roundtable Discussion on Transportation Control Strategies, Edward C. Sullivan, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p279-282.

Using Geographic Information Systems for Traffic Con-trol Inventory Management, Gary S. Spring, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl-8.

Traffic control devices
Advanced Software Design and Standards for Traffic Sig-nal Control, Darcy Bullock and Chris Hendrickson, TE May/June 92, p430-438.

Geometric Characterization of Road Humps for Speed-Control Design, T. F. Fwa and L. S. Tan, TE July/Aug. 92, p593-598.

Is Stop and Go Better Than Easing the Flow? (ltr), Eugene H. Harlow, CE July 92, p36,38.

Traffic delay

Comparison of Delay and ICU Analyses—Case Study, Cathy Higley and Venu Sarakki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paas-well, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., Computerion Schrift of the Computerion Schrift Schrift

Computerized Solution for Signalized Intersection Service Volumes, James W. Epps, TE July/Aug. 92, p496-

Truffic engineering
Actuated Traffic Signal Control at Diamond Interchange,
Kit M. Lum and Clyde E. Lee, TE May/June 92, p410-429.

429, Evacuation Modeling Near a Chemical Stockpile Site, Donald E. Newsom, Marc A. Madore and Robert T. Jaske, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p180-184.

Traffic flow

Trattic new Access Control to Projects Via Raised Islands, Justin F. Farmer, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail ed. and T. C. Sutaria, ed., 1992), p77-81.
Advanced Technology Applications in Chicago-Area Freeway Traffic Management Program, Joseph M. McDermott, TE May/June 92, p451-456.

Analyzing Fast-Food Drive-Up Window Site Impacts, J. L. Gattis, N. Zaman, G. W. Tauxe and R. S. Marshment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20.

and T. C. Sutaria, ed., 1992, p. 19-20.

Circulation Issues and Impacts—Corridor Redevelopment Santa Ana, CA—A Case Study, T. C. Sutaria and Abi Mogharabi, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.223-227.

The Design and Use of Flow-Through Hold Pads, Doug-las F. Goldberg, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), pl-6.

Designing Articulated Vehicles for Low-Speed Maneuver-ability, H. F. Chen and S. A. Velinsky, TE Sept./Oct. 92, p711-728.

Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.

Honolulu Harbor Ship Traffic Simulation and Animation Study, James R. Walker, Vedat Demirel and Michael C. Leue, (Ports '92, David Torseth, ed., 1992), p868-

Planning for Movement of Very Large, Slow-Moving Vehicles, John Morrall, Walid Abdelwahab and Al Werner, TE May/June 92, p381-390.

Saturation Flow and Capacity of Shared Permissive Left-Turn Lane, Feng-Bor Lin, TE Sept./Oct. 92, p611-630.

592

Estimation of Pass-By Trips Using a License Plate Survey, Soumya S. Dey and Jon D. Fricker, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p42-46.

cu., 1992), pa2-46.

Network Model Analysis of Traffic Patterns Resulting from a Proposed Regional Mall, Stephen Lawe, Norman Marshall and Peter Ryner, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p89-93.

Advanced Software Design and Standards for Traffic Sig-nal Control, Darcy Bullock and Chris Hendrickson, TE May/June 92, p430-438.

Advanced Technology Applications in Chicago-Area Freeway Traffic Management Program, Joseph M. McDermott, TE May/June 92, p451-456.

Application of Traffic Engineering Concepts to Pleasure Boat Traffic, Russell H. Boudreau, Michael C. Leue and James R. Walker, (Ports '92, David Torseth, ed., 1992), p248-262.

Columbus Discovers Traffic Management, CE Apr. 92. p22.

The Design and Use of Flow-Through Hold Pads, Doug-las F. Goldberg, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992),

Designing Articulated Vehicles for Low-Speed Maneuver-ability, H. F. Chen and S. A. Velinsky, TE Sept./Oct. 92, p711-728.

Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.

Fine Tuning the Airfield: The New Denver International Airport, Richard F. Veazey, Unternational Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p7-13.

HOV Lessons, Katherine F. Turnbull and Dennis Chris-tiansen, CE Sept. 92, p74-75.

Issues in Developing Control Zones for International Space Operations, Blair A. Nader and Kumar Krishen, AS Oct. 92, p387-404.

IVHS Advances in Chicago, CE Mar. 92, p17-18.

IVIS Advances in Chicago, Lewis, 26, 2017.
Knowledge-Based System for Design of Signalized Intersections, J. S. Linkenheld, R. F. Benekohal and J. H. Garrett, Jr., TE Mar/Apr. 92, p241-257.
Reexamination of Directional Distribution of Highway Traffic, Satish C. Sharma and Awadhesh K. Singh, TE Mar./Apr. 92, p323-337.

Transportation for Hong Kong Requires Solutions to Issues and Problems, C. K. Chow, El July 92, p294-306.

Transportation Management in the Anacostia Waterfront Washington, D.C. Louis J. Slade, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paas-well, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p159-163.

Traffic models

Traffic models
Development Impact Assessment with Transportation Models, John Loper and Robert C. Hazlett, Jr., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p233-237.
Improvements on Quantifying Pass-By Trips for Shopping Centers, Rahim F. Benekohal, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p47-51.
Planning for Movement of Very Large, Slow-Moving Vehicles, John Morrall, Walid Abdelwahab and Al Werner, TE May/June 92, p381-390.
Transportation Management in the Anacostia Waterfront Washington, D.C. Louis J. Slade, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p159-163.
Using Computer Models in Site Impact Assessment, James G. Douglas, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p123-127.
Using Traffic Network Models to Assess Site Impact Traffic, Steven B. Colman and Michael N. Aronson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p123-127.
Traffic planning

Traffic planning
Access Control to Projects Via Raised Islands, Justin F. Farmer, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p77-81.
Actuated Traffic Signal Control at Diamond Interchange, Kit M. Lum and Clyde E. Lee, TE May/June 92, p410-

Comparison of Delay and ICU Analyses—Case Study, Cathy Higley and Venu Sarakki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paas-well, ed., Napui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.21-25.

1992), p21-23.
Estimation of Pass-By Trips Using a License Plate Survey, Soumya S. Dey and Jon D. Fricker, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p42-46.
The Foundation for a Successful Traffic Impact Analysis.

ed., 1992), p42-46.

The Foundation for a Successful Traffic Impact Analysis, Jacob Wattenberg, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p11-15.

A Guideline for Determining Minimum Threshold Requiring Traffic Impact Studies, Anthony A. Saka, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6-10.

Palm Beach County Traffic Impact Analysis—A Prototype, Joseph B. Pollock, Jr. and Jacob Wattenberg, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p104-108.

Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, ed., Nagui Rouphail, ed. and T. C. Sutari

Traffic Data Collection: What Really Needs to be Done?

A. S. Narasimha Murthy, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), pl-5.

Traffic safety

Traffic safety
Identification of Inappropriate Driving Behaviors, John
M. Mason, Jr., Kay Fitzpatrick, Deborah L. Seneca and
Thomas B. Davinroy, TE Mar./Apr. 92, p281-298.
The Isolated Signalized Intersection as a Mitigation on a
High-Speed Highway, Thomas C. Ferrara, A. Reed
Gibby and Simon P. Washington, (Site Impact Traffic
Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed.,
1992), p57-61.

Procedures for Estimating Accident Reductions on Two-Lane Highways, Rahim F. Benekohal and Asma M. Hashmi, TE Jan./Feb. 92, p111-129.

Traffic signal controllers

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Actuated Traffic Signal Control at Diamond Interchange, Kit M. Lum and Clyde E. Lee, TE May/June 92, p410-429.

Distributed Approach to Optimized Control of Street Traffic Signals, Nicholas V. Findler and John Stapp, TE Jan./Feb. 92, p99-110.

IVHS Aids Traffic Flow, CE Aug. 92, p16,18-19.
Traffic Signal Using Mixed Controller Operations, S. Manzur Elahi, A. Essam Radwan and K. Michael Goul, TE Nov./Dec. 92, p866-880.

Traffic signals

Distributed Approach to Optimized Control of Street
Traffic Signals, Nicholas V. Findler and John Stapp,
TE Jan./Feb. 92, p99-110.

The Isolated Signalized Intersection as a Mitigation on a High-Speed Highway, Thomas C. Ferrara, A. Reed Gibby and Simon P. Washington, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pass-well, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p57-61.

1992, p.57-63.
Knowledge-Based System for Design of Signalized Intersections, J. S. Linkenheld, R. F. Benekohal and J. H. Garrett, Jr., TE Mar./Apr. 92, p.241-257.
Traffic Signal Using Mixed Controller Operations, S. Manzur Elahi, A. Essam Radwan and K. Michael Goul, TE Nov./Dec. 92, p866-880.

Traffic speed

The Isolated Signalized Intersection as a Mitigation on a High-Speed Highway, Thomas C. Ferrara, A. Reed Gibby and Simon P. Washington, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p57-61.

Reexamination of Directional Distribution of Highway Traffic, Satish C. Sharma and Awadhesh K. Singh, TE Mar/Apr. 92, p323-337.

## Traffic volum

Truffic volume
The Application and Use of Impact Fees: Legal Issues,
Charles L. Siemon, (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Paaswell, ed., Nagui
Rouphail, ed. and T. C. Sutaria, ed., 1992), p238-243.
Arizona's Metropolitan Travel Reduction Programs, Elizabeth K. Burns, (Transportation Planning and Air
Quality, Roger L. Wayson, ed., 1992), p76-84.
Bridge Evaluation for Multipresence of Vehicles, Baidar
Bakht and Leslie G. Jaeger, ST Mar. 90, p603-618.

Comparison of Delay and ICU Analyses—Case Study, Cathy Higley and Venu Sarakki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p21-25.

Improvements on Quantifying Pass-By Trips for Shopping Centers, Rahim F. Benekohal, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p47-51.

Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, Guido Schattanek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p315-326.

A Multiple Presence Load Model for Bridges, Robert J. Heywood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p579-582.

Planning for Movement of Very Large, Slow-Moving Vehicles, John Morrall, Walid Abdelwahab and Al Werner, TE May/June 92, p381-390.

Site Impact Analysis Using the Tranplan Computer Model, Robert B. Hearn and L. P. Ledet, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p82-83.

Successful High Traffic Chip Seal Construction, Scott Shuler, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p186-205.

Traffic Data Collection: What Really Needs to be Done?
A. S. Narasimha Murthy, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p1-5.

The Traffic Impact Study and Traffic Impact Fees, Timo-thy T. Jackson, (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p228-232.

Training
Conflict Management Training for Today's Engineering
Managers, Victi S. Kaman and James A. McCambridge, ME July 92, p298-305.
Women Into the Workplace, Patti Hinckley,

orioge, Mt. July 92, p.298-305.

Egineering Women Into the Workplace, Patti Hinckley, CE Nov. 91, p66-67.

A Facility for Training Space Station Astronauts, Ankur R. Hajare and James R. Schmidt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992). p1645-1655.

In-House Training, Formal Education and Public Out-reach, Yolanda A. Willis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2190-2201. Portrait of a Manager, Paul Tarricone, CE Aug. 92, p52-

True Costs, Charles S. Hodge, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1095-1100.

Using a Lunar Base Scenario Context in Business Educa-tion, Cathleen S. Burns and Sherry K. Mills, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2172-2187.

Laser Interferometric Characterization of Acoustic Emis-sion Transducers, Douglas A. Bruttomesso and Lau-rence J. Jacobs, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p256-259.

Transfer facilities

Development of a Demonstration Program for a Dry Cask-to-Cask Transfer System with Dual Purpose Casks, Rita W. Bowser and Robert E. Jones, High Level Re-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1902) 2212 2218

dioactive Waste Management Program Committee, 1992), p212-2218.
On-Off Terminal Ship-to-Rail Transfer, Asaf Ashar, (Ports '92, David Torseth, ed., 1992), p108-120.
On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, Rick Vargo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p885-896.

Transfer function

Frequency Domain Analysis of Undamped Systems, Eduardo Kausel and Jose M. Roësset, EM Apr. 92,

Introduction to Ownership and Transition. I: Ownership Transfer Considerations, Robert E. Olden, ME Oct. 92. p367-375.

Introduction to Ownership and Transition. II: Succession and Firm Valuation, Robert E. Olden, ME Oct. 92, p376-383.

p376-383.

Orbital Construction of a NTR Mars Transfer Vehicle, Steve Jolly, Mike Loucks and George W. Morgenthaler, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p987-998.

Seismic Response of Landfill Slopes, D. G. Anderson, B. Hushmand and G. R. Martin, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p973-989.

Study of Open-Channel Dynamics as Controlled Process, Yuri A. Ermolin, HY Jan. 92, p59-72.

Transformations
Lagrangian Motions in Simple Kinematic Oscillatory
Flow Field, Kuo-Chuin Wong, WW Jan/Feb. 91, p29-

Networks, Bryan W. Karney and Duncan McInnis, HY July 92, p1014-1030.

Transient loads

Construction Loads on Floors: Results of a Survey, Stuart G. Reid, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p499-

Transient response
Nonstationary Response of Structures with Closely
Kanamina Xu and Takeru Igusa, Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.

Stress Wave Interaction in Finite Beam on Elastic Foundation, M. C. Wang and C. S. Little, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p580-583.

cd., 1992, p. 260-363.
Transiert Analysis of Flexible Space Structures, D. L. Rice and E. C. Ting, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p827-838.

Design of Transient and Steady State Drain Spacing, Lyman S. Willardson and Masoud Alemi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p57-62.

Modeling Channel Bed Transients Using Explicit F-D Schemes, B. Morse and R. D. Townsend, HY Nov. 90, p1345-1356.

pl 345-1356. Pseudoforce Method of Solution for Highly Nonlinear Systems, Satish Nagarajaiah and Andrei Reinhorn, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pp 13-920. State-Space Analysis and Control of Slow Transients in Pipes, Masashi Shimada, HY Sept. 92, pl 287-1304. Transients in Canal Network, Rajeev Misra, K. Sridharan and M. S. Mohan Kumar, IR Sept./Oct. 92, p690-707.

Transition points
Design of Trapezoidal Expansive Transitions, Prabhata
K. Swamee and Bharat C. Basak, IR Jan./Feb. 92, p6173.

Transmission lines
Coupled Vertical and Horizontal Galloping, Kathleen F.
Jones, EM Jan. 92, p92-107.
Design Concepts for a Lunar Electric Power System, Kenneth Owrey, Herminio Abcede and Davy Nyirenda, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p774-785.
Reliability-Centered Management of Wood Transmission
Lines, James M. Treat, Patrick J. Hasenochri and Andrew H. Stewart, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p91-95.

p91-95.
Transmission towers

Design of Latticed Steel Transmission Structures (ANSI/ASCE 10-90) (St No. 90-010), Standards Committee for Design of Steel Transmission Towers, American Society of Civil Engineers, (Edwin H. Gaylord, chmn.), 1992, 0-87262-858-2, 64pp.

An Integrated Representation of Form, Function and Behavior in Structural Engineering, D. H. Douglas Phan, Jamal A. Abdalla and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p394-401.

erogel—A Transparent, Porous Superinsulator, Arlon J. Hunt, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), p398-403.

psy8-403.

Transpiration

2-D Evaporation and Root Extraction in an FEM, Richard G. Allen and Wigdan I. Ahmad, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p189-196.

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojas and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p158-163.

Transport phenomena
Achievements Within the International INTRAVAL Project, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1902): 4144-41420 1992), p1414-1420.

Agricultural Impacts on Surface Water via Ground Water, William L. Magette, Adel Shirmohammadi, James D. Wood and Theodore H. Ifth, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p407-412.

Application of Three-Dimensional Lagrangian Residual Transport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, HY June 92, p831-848.

Approximation of Convective Processes by Cyclic AOI Methods, Guus S. Stelling and Jan J. Leendertse, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Bumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p771-782.

Boundary-Conforming Coordinate System for Ground-water and Contaminant Transport Modeling, Xiaoxia Zhao and Victor L. Zitta, (Hydraulie Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p192-197.

Can the Kristallin-1 Near-Field Model be Considered Robust? I. G. McKinley, P. A. Smith and E. Curti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Alan Bum-Bilegaard, Hanne Karin Bach and Erik Koch Rasmussen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p317-331.

colm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p317-331.

Comparison of Numerical Modeling Approaches for Subsurface Immiscible Contaminant Transport, Klaus Rathfelder and Linda M. Abriola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p273-280.

Computer Codes for Modeling Multi-Phase Flow and Transport in the Subsurface, Paul K. M. van der Heijde, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p31.

Critical Issues Related to a Combined Probabilistic Numerical Analysis of Contaminant Transport in Porous Media, Jeffrey D. Cawlfield and Ming-Chee Wu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p232-235.

Design of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, M. D. Siegel, P. L. Hopkins, R. J. Glass and D. B. Ward, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p217-21984.

Diffusion of Radionuclides in Compacted Bentonite, Jong-Won Choi, Choong-Hwan Jung, Kwan-Sik Chun, Hyun-Soo Park, Joo-Ho Whang and Byung-Hun Lee, (High Level Radioactive Waste Management Program Committee, 1992), p278-2283.

Dynamic Plug Flow Reactor Network Model for Contaminant Transport in Water Distribution Systems, James Uber, Ken Hickey, Mao Fang and Lew Rossman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179.

Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Mal-Colme, ed., Ralph Cheng, ed. and Castal Modeling, Mal-Colme, ed., Ralph Cheng, ed. and Castal Modeling Mal-Colme and Coastal Modeling, Mal-Colme, ed., Ralph Cheng, ed. a

Steing, do. and Craig Swanson, ed., 1924, 09-202-861-2, 798pp.

Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, J. M. Hamrick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303.

Field Research Program for Unsaturated Flow and Transport Experimentation, V. C. Tidwell, C. A. Rautman and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p704-709.

Flow and Transport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, In Che Yang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p732-737.

High Level Radioactive Waste Management, 2 vols., High Level Radioactive Waste Management Program Com-mittee, (James S. Tulenko, chmn.), 1992, 0-87262-891-4, 2492pp.

891-4, 2492pp.

The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, Boris Galperin, Alan F. Blumberg and Robert H. Weisberg, Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p332-343.

Integrated Performance Assessment Model for Waste Package Behavior and Radionuclide Release, Richard Kossik, lan Miller and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1786-1793.

Lagrangian Transport Simulation Heine Video.

Waste Management Program Committee, 1992), p1786-1793.

Lagrangian Transport Simulation Using Video Images to Store and Retrieve Parameters, Poojitha D. Yapa and Jay B. Perry, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p13-25.

Linking GIS with Hydrologic Modeling, Barry Evans, Jeffrey Grimm, Larry Thornton and Paul Sanders, (Irrigation and Drainages: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p499-504.

Migration of Chloroform in Aquifers, Sergio E. Serrano, EE Mar/Apr. 92, p167-182.

Model for Pollutant Transport by Eddy Simulation, E. R. Holley, Y. C. Su, G. H. Ward and R. de Souza, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598.

Model for Transport of Floating Debris in the Ocean, Y. C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.

Modeling the Pathways of Nonconservative Substances in Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p280-291.

Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p280-291.

Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p280-291.

Modeling Transport and Fate of Micropollutants in Coastal Waters, Viitte Nauta, Hans van Pagee and

ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p357-369.

Modeling Transport and Fate of Micropollutants in Coastal Waters, Tjitte Nauta, Hans van Pagee and Mindert de Vries, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p304-316.

Movement of Nonpoint-Source Contaminants Through Heterogeneous Soils, John C. Tracy, IR Jan/Feb. 92, p88-103.

A New Methodology for Repository Site Suitability Evaluation, Ian Miller, Richard Kossik and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p494-501.

Numerical Modeling of Flow and Transport Phenomena in a Fractured Rock and Its Calibration Process, A. Kobayashi, R. Yamashita and Y. Moro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p693-703.

Waste N p695-703.

waste Management Frogram Committee, 1992), p695-703. Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p418-429. Passive Dispersive Transport Modelling: Comparison with Experimental Rhodamine Data in the Elbe Estuary, Germany, Joachim Krohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p127-139.

PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Eon Howlett and Daniel L. Mendelsohn, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500.

Plume Movement and Mixing in Heterogeneous Aquifer, Salwa Rashad, John Hoopes, Craig Fergusson and Tswn-Syau Tsay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p180-185

185.
Pollutant Transport Modelling in Large River Plumes, J. A. Stronach, C. R. Murthy and T. S. Murty, Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Betiford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p759-770.
A Preliminary Evaluation of Transport Mechanisms for Multiple Substrates in a Laboratory Column System, Zhihuai Xue and William F. McTernan, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p180-185.

Problems in Hydrothermal Analysis, John Eric Edinger and Edward M. Buchak, (Hydraulic Engineering: Sa-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

1992), p164-169.

Ouantitative Comparison Between Colloidal and Solute Transport, J. Y. Chung and K. J. Lee, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1966-1971.

passe Vasase vasase and the property of the pr

Simulating Solute Transport Using Laboratory-Based Sorption Parameters, Thomas C. Harmon, Lewis Sem-prini and Paul V. Roberts, EE Sept./Oct. 92, p666-689.

prini and raul V. Koberts, EE Sept./Oct. 92, p666-689. Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Annual Timescales, Richard A. Schmalz, Jr., (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p641-452.

1992), p441-452.

David W. Engel, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1738-1764.

A Study of Salt Transport Processes in Delaware Bay, Roy A. Walters, (Estuarrine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p240-251.

A Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinipour and Vincent M. Gorokhovski, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p186-191.

Suspended Sediment-Transport Capacity for Open Chan-nel Flow, Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204.

Theory of Chaos and Radionuclide Distribution, E. A. Yfantis, G. Miel and G. M. Gallitano, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2339-2343.

Model, A. K. M. Quamrul Ahsan and M. S. Bruno, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p1-12.

Cheng, ed. and craig swanson, ed., 1992), p1-12. Three-Dimensional Finite Element Modelling of Near-Field Contaminant Transport in a Nuclear Fuel Waste Disposal Vault, Tin Chan and Frank Stanchell, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p297-303.

Transport of Low-Level Radioactive Soil at Deep-Ocean Disposal Site, James S. Bonner, Carlton D. Hunt, John F. Paul and Victor J. Bierman, Jr., EE Jan./Feb. 92, p101-119

A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

Use of Contaminant Mobility and Transport Parameters to Determine Water Testing Protocol, Paul D. Robil-lard and Perry B. Kubek, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p831-836.

Use of Fractal Geometry Concepts in the Simulation of Ground Water Flow and Transport Processes, Angelos N. Findikakis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p33-

Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Randall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-

Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, Dennis L. Corwin, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p152-157.

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Validation of Safety Assessment Models as a Process of Scientific and Public Confidence Building, Shlomo P. Neuman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1404-1413.

Committee, 1992, p1404-1413.
Water Quality Modelling: Prediction of the Transport of Water Constituents in the Weser Estuary (Germany, Agmar Müller, Iris Grabemann and Bernhard Kunze, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

X-Ray and Visible Light Transmission as TwoDimensional, Full-Field Moisture-Sensing Techniques:
A Preliminary Comparison, V. C. Tidwell and R. J.

Glass, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p1099-1110.

Yucca Mountain Project Total-System Performance As-sessment Preliminary Analyses: Overview, R. W. Bar-nard and H. A. Dockery, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p874-881.

Bed-Load and Suspended-Load Transport of Nonuniform Sediments, Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY June 91, p774-787.

Intra Vena Cava Balloon Pumping, Tin-Kan Hung, Thomas E. Natan, Hua-qiang Li, Frank R. Walters and Brack G. Hattler, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p709-

Longshore-Transport Model for South Indian and Sri Lankan Coasts, P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-424.

Transportation of NUHOMS\* to an Integrated MRS/ Transportation System, J. M. Rosa, R. A. Lehnert and R. D. Quinn, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p196-200.

An Assessment of the Transportation Costs of Shipping Non-Fuel Assembly Hardware to FWMS Facilities, L. B. Shappert, P. E. Johnson, D. S. Joy, R. E. Best and F. L. Danese, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p190-195.

Benefits of International Technical Collaboration, Thomas H. Isaacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32.

The Challenge of Constraining Mass for Planetary Construction, John F. Connolly, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p350-356.

356.
Coigate Palmolive Transportation Impact Case Study, Martin J. Wells and Jay S. Bockisch, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p154-158.
A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, K. Branch, N. Coburn, G. Curtis, J. Holm and S. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Hoppl. Devel Radioactive Waste Management Program Committee, 1992), p156-160.

dioactive Waste Management Program Committee, 1992), p156-160.
Criticality Safety and Shielding Design Issues Related to Transport Cask Design, Alan H. Wells, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Collection 1551-2155.

Waste Management Program Committee, 1992), p2151-2155.

Cylindrical Fabric-Confined Soil Structures, Richard A. Harrison, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p123-134.

Data Bases About the Transportation of Radioactive Materials, Cheryl Cashwell and James D. McClure, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Trogram Committee, 1992), p427-431.

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.

Disposal of Failed Melters from Defense Waste Vitrification Facilities, P. J. Brackenbury, J. King and E. C. Norman, (High Level Radioactive Waste Management Program Committee, 1992), p1281-12386.

Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, M. Peehs and K. Einfeld, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Flagility Interface Casability Assessment, Thomas E. Pol-Facility Interface Casability Assessment, Thomas E. Pol-Facility Interface Casability Assessment, Thomas E. Pol-

(High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1181-1187. Facility Interface Capability Assessment, Thomas E. Pollog, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p178-182. High Level Radioactive Waste Management Program Committee, (James S. Tulenko, chmn.), 1992, 0-87262-891-4, 2492pp.

The Human Side of Systems, Harold E. (Smoke) Price, (High Level Radioactive Waste Management, High Level Waste Cask Design, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Transport Shielding Study, M. H. Dean, L. S. Grindrod, S. M. Jones and R. W. T. Siewright, (High Level Radioactive Waste Management Program Committee, 1992), p292, p206-2068.

Issues Related to the Transport of a Transportable Storage Cask After Storage Cask After Storage P. McConnell T. L. Sanders I.

gram Committee, 1992), p2062-2068.

Issues Related to the Transport of a Transportable Storage Cask After Storage, P. McConnell, T. L. Sanders, J. L. Brimhall, J. M. Creer, E. R. Gilbert and R. H. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180.

Lunar Liquid Oxygen Production Facilities, John Pulley, Chava Goodman and Al Tanner, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p739-751.

Method for Preevaluation and Selection of Road Projects.

Method for Preevaluation and Selection of Road Projects in Gabon, Jean-Michel Baryla, TE Jan./Feb. 92, p160-

Near-Field Radiation Doses from Transported Spent Nuclear Fuel, R. F. Weiner and K. S. Neuhauser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1205-1208.

A New Era In Transportation, John Prendergast, CE Apr. 92, p38-41.

74, p.38-41.
Noise Barrier Simulated by Rigid Screen with Back Wall, L. H. Huang and T. M. Kung, EM Jan. 92, p40-55.
Ontario Hydro Used Fuel Transportation Assessment, L. Grondin, D. Ribbans and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1209-1215.

hased Assembly of a European Space Station, David A. Nixon and Robin C. Huttenbach, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), hotogram

Photogrammetric Solution for Vehicle-Damage Investiga-tion, W. Faig, F. R. Wilson, D. King and T. Y. Shih, TE Nov./Dec. 92, p850-865.

Novince: 92, pp. 30-30-30, Trobabilistic Assessment of Spent-Fuel Cladding Breach, H. Foadian, Y. R. Rashid and K. D. Seager, [High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1018-1025.

13724, p1018-1025. Reactivity End-Effects Estimates Using A K<sub>00</sub> Perturba-tion Model, Charles R. Marotta, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2165-2173.

Waste Management Program Committee, 1992), p2165-2173.

Ropeway Material Handling Systems for Lunar Mining Sites, H. Peter Huttelmaier and Jonathan R. Carrick, (Engineering, Construction, and Operations in Space III, Willer, ed., 1992), p1116-1126.

Routine Methods for Post-Transportation Accident Recovery of Spent Fuel Casks, L. B. Shappert, R. B. Pope, R. E. Best and R. H. Jones, (High Level Radioactive Waste Management Program Committee, 1992), p1855-1859.

Status of Infrastructure Studies and Results, Michael Conroy, (High Level Radioactive Waste Management Program Committee, 1992), p183-189.

Strategic Planning for Transportation Under the NWPA: A State Perspective, Douglas Larson and Jim Miernyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), p1730-1736.

mutee, 1992), pl.730-1736.
Structural Credit for Depleted Uranium Used in Trasaport Casks, R. Salzbrenner, G. W. Wellman, K. B. Sorenson and P. McConnell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2241-2248.

p2241-2248.

Towards Confidence in Transport Safety: Demonstrating an Extraordinary Safety Program, R. W. Robison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1921-1926.

Transport of Multiassembly Sealed Canisters, R. D. Quinn, R. A. Lehnert and J. M. Rosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), e2210-2226. Waste Mar p2219-2226.

Program Committee, 1992), p2219-2226.

Transportation, Interim Storage, and Disposal Alternative for Virified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

Universal Storage Transport/Disposal Packages, Marvin L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p228-232.

Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389.

Verification of an Alluvial Fan Drainage Design Methodology for Transportation Alignments, Syndi J. Flippin and Richard H. French, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p575-580.

Transportation corridors

Alameda Transportation Corridor, Arthur B. Goodwin,
(Ports '92, David Torseth, ed., 1992), p94-107.

(Forts '92, David Torseth, ed., 1992), p94-107.

Transportation management
The Clean Air Act: Opportunities for the Transit Industry, Sarah Siwek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-75.

Decision Support System for Multiobjective Service Route Design, Jin-Yuan Wang and Jeff R. Wright, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16.

The Effectiveness of Telecommuting as a Transportation Control Measure, Srikanth Sampath, Somitra Saxena and Patricia L. Mokhtarian, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p347-362.

Opportunities for Improved.

362. Superiority of the state o

Transportation models Generating Detailed Emissions Forecasts Using Regional Transportation Models: Current Capabilities and Is-sues, Robert G. Ireson, Julie L. Fieber and Marianne C.

sues, Robert G. Ireson, June L. Fieber and Marianne C. Causley, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p142-160. Integrated Software for Transportation Emissions Analysis, William Loudon and Malcolm Quint, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p161-176.

1992, p161-19.
Summary of Roundtable Discussion on Modeling Issues, Paul E. Benson, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278.
Travel Markets: An Approach to TCM Effectiveness Evaluation, Donald A. Torluemke, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p177-181.

Transportation planning
The Clean Air Act: Opportunities for the Transit Industry, Sarah Siwek, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-75.
Computerized Transportation Planning Models for Site Impact Analysis: Precision or Complexity Edward A. Mierzejewski and Timothy Jackson, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p128-132.
Corridor, Planning and Traffic Assessment: Small Sites.

ed., 1992), p128-132.
Corridor Planning and Traffic Assessment: Small Sites and Neighborhoods, Marsha Anderson and Diane Simpson-Colebank, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p190-194.
Patterner Valley Regional Planning Commission's Anticipation.

Rouphall, ed. and T. C. Sultaria, ed., 1992), p190-194.
Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of 1990, Ronald J. Roggenburk, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p46-55.
Dinner Presentation, Robert D. Brenner, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),

Planning and Air Quality, Roger L. Wayson, ed., 1992), pp.1-6.
Effectiveness of Implemented HOV Lane System, Ron Klusza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89.
Evacuation Modeling Near a Chemical Stockpile Site, Donald E. Newsom, Marc A. Madore and Robert T. Jaske, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p180-184.
Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, David D. Morrow, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210.

Expert Systems: Ready to Hit the Road? James Denning, CE June 92, p71-74.

CE June 92, pp.1-4.

GIS for Transportation and Air Quality Analysis, Reginald R. Souleyrette, Shashi K. Sathisan, David E. James and Soon-tin Lim, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p182-194.

HOV Lessons, Katherine F. Turnbull and Dennis Christiansen, CE Sept. 92, p74-75.

WINE Air To The Eng. (T. Aug. 92, p1618-19).

IVHS Aids Traffic Flow, CE Aug. 92, p16,18-19.
Keynote Presentation, Julie Belaga, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p7-

Land Use, Transportation and Air Quality Relationships, George J. Scheuernstuhl and Jeffrey H. May, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p90-99.

Major Public Transportation Investments as "Development Projects". Old Colony Railroad, Mary P. McShane, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), pl 38-142.

Opportunities for Improved Transportation Planning, John H. Suhrbier, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p30-45.

Quality, Roget L. Wayson, ed., 1992), p30-43.
San Francisco Bay Area's Experience Developing Transportation Control Measures for Air Quality Plans,
Thomas Perardi, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p56-63.
Scheduling Demand-Responsive Transportation Vehicles
Using Fuzzy-Set Theory, Shinya Kikuchi and Robert
A. Donnelly, TE May/June 92, p391-409.

Shouldn't it be Transportation Impact Assessment? Kenneth E. Dallmeyer, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p133-137.

Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, 0-87262-870-1, 236pp.

Sularna, ed., 1992, U-8/202-8/U-1, 230pp.
Solid Waste Travel Demand Model Using GIS and Simulation for Evaluating Site Impacts, Erin K. Bashaw and P. A. Koushki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p185-189. Start-Ups, CE July 92, p11.

Start-Ups, CE July 92, p11.

Summary of Roundtable Discussion on Modeling Issues, Paul E. Benson, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278.

Summary of Roundtable Discussion on Transportation Control Strategies, Edward C. Sullivan, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p279-282.

Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992, 0-87262-815-9, 374pp.

Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A High-way Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p14-29.

Travel Markets: An Approach to TCM Effectiveness Evaluation, Donald A. Torluemke, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p177-181.

ASCE President Tells House Panel More Transportation Research Funds are Needed to Revive U.S. Infrastructure, NE Apr. 92, pl.

Emerging Issues in Transportation Facilities Management, Sue McNeil, Michael Markow, Lance Neumann, Jeffrey Ordway and Donald Uzarski, TE July/Aug. 92, p477-495.

Transportation system costs

New Transportation Bill Dominates TRB Meeting, CE Mar. 92, p27-28.

User Fees: Who Pays and How Much?, CE Sept. 92, p19.

Transportation system financing Corrections (ltr.), CE Mar. 92, p40.

New Transportation Bill Dominates TRB Meeting, CE Mar. 92, p27-28.

Transportation Bill Revises Federal Policy, Casey Dinges, CE Jan. 92, p106.

Transportation Funding Precarious, Casey Dinges, CE Sept. 92, p114.

Cables and Cranes for a Flexible Lunar Transportation System, Leonhard E. Bernold, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p308

Cargo Transport to the Lunar Surface Using a Three Rotor Sling, Brian Tillotson, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1010-1021.

Genesis: The Creation of a Lunar Base, Paul Bialla, Nathan Nottke and Seishi Suzuki, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p13

Huge Transportation Bill Signed by Bush; States Will Have Flexibility in Spending Federal Funds, NE Jan. 92, pl.

LGG System for Emergency Response Applications, Anthony A. Saka, SU Aug. 92, p96-98. Life-Cycle Considerations in Urban Infrastructure Engineering, David Novick, ME Apr. 90, p186-196.

neering, David Novick, Mr. Apr. 90, p186-196.
Lifeline Earthquake Engineering in the Central and Eastern U.S., Technical Council on Lifeline Earthquake Engineering Monograph No. 5, Donald B. Ballantyne, ed., 1992, 0-87262-902-3, 200pp.

The Potential Application of Military Fleet Scheduling Tools to the Federal Waste Management System Transportation System, I. G. Harrison, R. B. Pope, R. D. Kraemer and M. R. Hilliard, (High Level Radioactive Waste Management Program Committee, 1992), p1324-1329.

Regional Evaluation of Transportation Lifelines in New

Regional Evaluation of Transportation Lifelines in New York State with the Aid of GIS Technology, Masanobu Shinozuka, Michael P. Caus, Seong H. Kim and George C. Lee, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992; 116

1992), p102-109.

Seismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, Klaus H. Jacob, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p58-71.

Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chilcote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p.1-14.

Summary of Roundtable Discussion on Transportation Control Strategies, Edward C. Sullivan, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.279-282.

Transportation for Hong Kong Requires Solutions to Issues and Problems, C. K. Chow, El July 92, p294-306. Transportation Lifeline Losses in Large Eastern Earth-quakes, C. Rojahn, C. Scawthorn and M. Khater, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101. Trouble on the Waterways? Paul Tarricone, CE Feb. 91,

p52-55.

Transverse loads
Bridge Evaluation for Multipresence of Vehicles, Baidar
Bakht and Leslie G. Jaeger, ST Mar. 90, p603-618.

Transverse Shear Effect on Flutter of Composite Panels, Le-Chung Shiau and Jing-Tang Chang, AS Oct. 92, p465-479.

# Transverse wave

Pipeline Storm Behavior on Clay Soils, Derek V. Morris, Tony S. Yen, Wayne A. Dunlap and James R. Hale, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p560-570.

Trash Rack Blockage in Supercritical Flow, Steven R. Abt, Thomas E. Brisbane, David M. Frick and Charles A. McKnight, HY Dec. 92, p1692-1696.

Vibration of Beams and Trashracks in Parallel and In-clined Flows, Thang D. Nguyen and Eduard Naudasch-er, HY Aug. 91, p1056-1076.

Arizona's Metropolitan Travel Reduction Programs, Eliz-abeth K. Burns, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p76-84.

The Effectiveness of Telecommuting as a Transportation Control Measure, Srikanth Sampath, Somitra Saxena and Patricia L. Mokhtarian, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p347-

302.
HOV Lessons, Katherine F. Turnbull and Dennis Christiansen, CE Sept. 92, p74-75.
Land Use, Transportation and Air Quality Relationships, George J. Scheuernstuhl and Jeffrey H. May, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p90-99.

ed., 1992), p90-99.

Management of Design, Richard L. Haury, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p170-183.

Model for Air Travel Demand, V. R. Rengaraju and V. Thamizh Arasan, TE May/June 92, p371-380.

Solid Waste Travel Demand Model Using GIS and Simulation for Evaluating Site Impacts, Erin K. Bashaw and P. A. Koushki, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p185-189.

Travel Markets: An Approach to TCM Effectiveness Evaluation, Donald A. Torluemke, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p177-181.

VMT for Air Quality Purposes, Christopher R. Fleet and Patrick DeCorla-Souza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p126-141.

I ravet modes

Shouldn't it be Transportation Impact Assessment? Kenneth E. Dallmeyer, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p133-137.

Summary of Roundtable Discussion on Transportation Control Strategies, Edward C. Sullivan, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p279-282.

Transportation for Hong Kong Requires Solutions to Issues and Problems, C. K. Chow, El July 92, p294-306.

Travel patterns
The Effectiveness of Telecommuting as a Transportation
Control Measure, Srikanth Sampath, Somitra Saxena
and Patricia L. Mokhtarian, (Transportation Planning
and Air Quality, Roger L. Wayson, ed., 1992), p347-

362.
362.
Estimation of Pass-By Trips Using a License Plate Survey, Soumya S. Dey and Jon D. Fricker, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p42-46.
Integrated Software for Transportation Emissions Analysis, William Loudon and Malcolm Quint, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p161-176.
Summary of Roundtable Discussion on Transportation

Summary of Roundtable Discussion on Transportation Control Strategies, Edward C. Sullivan, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p279-282.

p219-282.

Trends in Published ITE Trip Generation Rates, C. Richard Keller, Jay E. Sherin and Michael C. Connor, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p32-36.

Trip Generation Rates, a Historical Look, Ann L. Koby and Dawn L. McKinstry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p37-41

Evaluation of Palmiter Erosion Remediation niques—A Case Study, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p660-665.

Water Quality Effects on Eucalyptus ET. Allen Dong, Kenneth Tanji, Steve Grattan, Fawai Karajeh and Marc Parlange, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p164-170.

Slide Stabilization with Stone-Fill Trenches, George L. Sills and Robert L. Fleming, Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1382-1394.

600

### Trenching

Dallas Goes Trenchless, A. V. Almeida, CE Sept. 92, p71-73.

## Trends

The Application of Technology to Solving Practical Prob-lems, James R. Walker, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p908-917.

Coastal Engineering—The Past!, The Present!, The Future? Omar J. Lillevang, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1-11.

December Helps, But Contracts Still Down, CE Apr. 92, p10.

Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163.

The Future Role of Factory Built Housing, Fred C. Hallahan, Jr., (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p29-38.
Future Trends and Needs in Hydraulics, Daryl B. Simons, HY Dec. 92, p1607-1620.

Happy Days Are Here Again? Says Report, CE Oct. 92, p8.

Latest ASCE Salary Survey Shows Upward Trend, NE Mar. 92, p1. New Cable-Stayed Bridge Will Span the Mississippi, CE

Feb. 92, p16-18.

'One-Stop Shopping' at World of Concrete, CE Apr. 92, p12-13.

Organizational Design: Some Helpful Notions, Melville Hensey, ME July 90, p262-269. Professionalism and Marketing of Civil Engineering Profession, John A. Alexander, El Jan. 91, p10-20.

Rail Industry Trends Related to Waste Transportation, Ruth Maddigan, Marlene Owens and Paul Shelton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1330-1335.

Trends and Debatable Aspects in Embankment Dam En-gineering (Paper introduced by Edward B. Perry), J. L. Sherard, (Embankment Dams—James L. Sherard Con-iributions, Sukhanander Singh, ed., 1992), p403-410.

Design of Oak Point Link Railroad Trestle, Eugene Pollner and Kim Plumacher, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809.

## Triangulation

Iriangulation
Automated Delineation of Catchment Area Boundaries
with TINs, Norman L. Jones and James Nelson, (Hydraulic Engineering: Suring a Threatened Resource—
In Search of Solutions, Marshail Jennings, ed. and Nani
G. Bhowmik, ed., 1992), p347-352.
Drainage Analysis Using Triangulated Irregular Networks, Norman L. Jones and James Nelson, (Computing in Civil Engineering and Geographic Information
Systems Symposium, Barry J. Goodon, ed. and Jeff R.
Wright, ed., 1992), p719-726.
Mesh Generation for Estuarine Flow Modeling. Norman

Mesh Generation for Estuarine Flow Modeling, Norman L. Jones and David R. Richards, WW Nov./Dec. 92,

Two Examples of Position Estimation, Gary Shaffer and Ben Motazed. (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p880-887.

Stress-Strain-Strength Responses of Compressible Chicago Glacial Clays, Richard J. Finno and Choong-Ki Chung, GT Oct. 92, p1607-1625.

Analysis of Membrane Penetration in Triaxial Test, Steven L. Kramer, N. Sivaneswaran and R. O. Davis, EM Apr. 90, p773-789.

Behavior of Compacted Lunar Simulants Using New Vacuum Triaxial Device, Chandra S. Desai, Hamid Saadatmanesh and Thomas Allen, AS Oct. 92, p425-

Engineering Properties of Acrylate Polymer Grout, Raymond J. Krizek, Dominique F. Michel, Maan Helal and Roy H. Borden, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724.

Hydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, Victor R. Hasfurther and John P. Turner, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p395-400.

Improved Resilient Modulus Realized with Waste Product Mixtures, Seung W. Lee and K. L. Fishman, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1356-1367.

1992), p1356-1367. Influence of Structure and Composition on Residual Soils, Laurence D. Wesley, GT Apr. 90, p589-603. Mechanical Properties of Compacted Lunar Simulant Using New Vacuum Triaxial Equipment, Chandra S. Desai, Hamid Saadatmanesh and Tom Allen, Engeneering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1240-1249. Membrane Compliance and Liquefaction of Sluide Gravel Specimens, Mark D. Evans, H. Bolton Seed and Raymond B. Seed, GT June 92, p836-872. Modeling Strength of Sandy Gravel, Richard J. Fragaszy.

Modeling Strength of Sandy Gravel, Richard J. Fragaszy, James Su, Farhat H. Siddiqi and Carlton L. Ho, GT June 92, p920-935.

The Optimum Gravity Dam, Jerome M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p5-19.

Prancis G. McLean, ed., 1992), p5-19.

Problems Related to Disposal of Fly Ash and its Utilization as a Structural Fill, Buddhima Indraratna, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p274-285.

Strain-Softening Behavior of Granular Soil in Strain-Path Testing, J. Chu, S.-C. R. Lo and I. K. Lee, GT Feb. 92, p191-208.

Stress Ratio Effects on Collapse of Compacted Clayey Sand, Evert C. Lawton, Richard J. Fragaszy and James H. Hardcastle, GT May 91, p714-730.

Application of Monthly Model of Los Angeles Aqueduct System to Investigate Impacts from Mono Lake Tribu-tary Diversions, Russ T. Brown and William R. Hutchison, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p1042-1048.

Impact of Flow Variability on Error in Estimation of Tributary Mass Loads, Stephen D. Preston, Victor J. Bierman, Jr. and Stephen E. Silliman, EE May/June 92, p402-419.

# Trichioroethylene

Trichloroethylene
Effects of Soil Moisture and Physical-Chemical Properties of Organic Pollutants on Vapor-Phase Transport in the Vadose Zone, Say Kee Ong, Theress B. Culver, Leonard W. Lion and Christine A. Shoemaker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179.
Implementing a Wellhead TCE Removal Project in Redlands, Richard Corneille and Michael Huffstutler, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p315-320.
Permeation of Organic Chemicals Through HDPF

ed., 1992), p313-320.

Permeation of Organic Chemicals Through HDPE
Geomembranes, Joni P. Sakti, Jae K. Park and John A.
Hoopes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Piere

Treatment of Contaminated Groundwater Using Chemi cal Oxidation, Mark E. Zappi, Beth C. Fleming and M. John Cullinane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), Jennings, ed p1184-1189.

VOC-Contaminated Water Cleanup Incentive Program Dan L. Glasgow and Richard A. Rhone, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p214-219.

Trickle irrigation
Recycling Wastewater by Drip Irrigation, Win Bui, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p437-

Trickle Channel Rehabilitation, Mark R. Hunter, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p504-509.

Tribalomethanes
Pilot Study to Meet Drinking Water Regulations, Linda Rae Loong, Patti P. Craddock and Carol Ruth James, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509.
Removal of Trihalomethane Precursors by Ferric Chloride Coagulation, Anne Studstill and Appiah Amirtharajah, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p526-531.
Simulating THM Formation Potential in Sacramento Delta: Part I, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p513-529.
Simulating THM Formation Potential in the Sacramento Delta: Part II, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p530-542.

WR Sept./Oct. 92, p530-542.

Trip forecasting
Hotel-Casino Trip Generation Analysis Using GIS, Reginald R. Souleyrette, Shashi K. Sathisan and Emelinda M. Parentela, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p52-56.

Improvements on Quantifying Pass-By Trips for Shopping Centers, Rahim F. Benekohal, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p47-51.

Trends in Published ITE Trip Generation Rates, C. Richard Keller, Jay E. Sherin and Michael C. Connor, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p32-36.

Trip Generation Rates, a Historical Look, Ann L. Koby and Dawn L. McKinstry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p37-41.

41.

Trip frequencies
The Clean Air Act: Opportunities for the Transit Industry, Sarah Siwek, (Transportation Planning and Air Quality, Roger L Wayson, ed., 1992), p64-75.

Corridor Planning and Traffic Assessment: Small Sites and Neighborhoods, Marsha Anderson and Diane Simpson-Colebank, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p190-194.

The Effectiveness of Telecommuting as a Transportation

roupnau, ed. and T. C. Sutaria, ed., 1992), pl 90-194. The Effectiveness of Telecommuting as a Transportation Control Measure, Srikanth Sampath, Somitra Saxena and Patricia L. Mokhtarian, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p347-362.

362.

Scheduling Demand-Responsive Transportation Vehicles Using Fuzzy-Set Theory, Shinya Kikuchi and Robert A. Donnelly, TE May/June 92, p391-409. Trends in Published ITE Trip Generation Rates, C. Richard Keller, Jay E. Sherin and Michael C. Connor, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p32-36.

Trip Generation Rates, a Historical Look, Ann L. Koby and Dawn L. McKinstry, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p37-41.

Tropical regions

Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, Robert C. MacArthur, Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-

BEST: New Satellite Mission Dedicated to Tropical Sys-tem Energy Budget, M. Orgeret, AS Jan. 92, pl-11. BOD Test for Tropical Countries, Nilay Choudhari, Pari-tosh C. Tyagi, N. Niyogi, V. P. Thergaonkar and P. Khanna, EE Mar/Apr. 92, p28-303. Design Optimization of Passively Cooled Room, Sydney C. K. Chu and Piyawat Boon-Long, EY Apr. 92, p18-

Importance of the Tropical Rainfall Measuring Mission (TRMM) Satellite to Hydrological Investigations, Joanne Simpson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p523-528.

Designing Articulated Vehicles for Low-Speed Maneuver-ability, H. F. Chen and S. A. Velinsky, TE Sept./Oct. 92, p711-728.

Effect of Tire Parameters on Pavement Damage and Load-Equivalency Factors, Peter E. Sebaaly and Nader Tabatabaee, TE Nov./Dec. 92, p805-819.

Estimating Truck's Critical Cornering Speed and Factor of Safety, Francis P. D. Navin, TE Jan./Feb. 92, pl 30-

149.2.
Future Impact of Trucking Reform on Railway Revenue, Ahmed M. Gadi and Afifi H. Soliman, TE Sept./Oct. 92, p729-743.
Live Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nassif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

1992), p587-590.
Signing Systems: Directional, Identity, and Graphic Systems for the Port of Long Beach, Mackey W. Deasy, Wayne Hunt and Louis Rubenstein, (Ports '92, David Torseth, ed., 1992), p58-93.
Sludge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Balog, Manu A. Patel and Turgay M. Ertugrul, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p303-308.
Statistical Evaluation of Truck Overloads, Jamshid Mohammadi and Nadir Shah, TE Sept./Oct. 92, p651-665.

Truck Loading Data for a Probabilistic Bridge Live Load Model, Dan M. Frangopol, George G. Goble and Nurhan Tan. (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-343.

Analysis of Space Crane Articulated-Truss Joints, K. Chauncey Wu and Thomas R. Sutter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p320-331.

Clear-Span Structure Sets Temporary Record, CE Apr. 92, p18-19.

Concurrent Optimization of Large Structures. I: Algorithms, Hojjat Adeli and Osama Kamal, AS Jan. 92, p79-90.

Concurrent Optimization of Large Structures. II. Applica-tions, Hojjat Adeli and Osama Kamal, AS Jan. 92, p91-110.

Event-to-Event Strategy for Nonlinear Analysis of Truss Structures. I, A. Karamchandani and C. A. Cornell, ST Apr. 92, p895-909.

Evolution of the Space Station Freedom Module Pattern, Marston Gould, James Hendershot and Rudy Saucillo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p975-986.

Nov. 91, p34-37.

Howe Truss Behavior Interpreted by Deflections, Zbigniew Cywiński, Marek Jasina and Stefan Niewitecki, CF Aug. 92, p151-160.

CF Aug. 92, p131-160.
Modeling and Analysis of Doubly Curved Aerobrake
Truss Structures, Gregory Washington and Eric Klang,
[Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p933-944.
The OCEA Awards of Merit, Teresa Austin, CE July 92,

p50-53.

Reliability Analysis of Truss Structures with Multistate Elements. II, A. Karamchandani and C. A. Cornell, ST Apr. 92, p910-925.

Apr. 24, py10-y2.

Response of Space Structures Under Sudden Local Damage, Ramesh B. Malla and Baihai Wang, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p909-920.

Statically, Determinate Transcrape

Vlasis K. Koumousis and Panos G. Georgiou, CP Oct. 92, p435-455.

Structural Characterization of an Articulated-Truss Joint, Thomas R. Sutter, K. Chauncey Wu, Kevin T. Riutod, Joseph B. Laufer and James E. Phelps, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p296-307.

Weldment Design for RHS Truss Connections. I: Appli-cations, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2784-2803.

Weldment Design for RHS Truss Connections. II: Experi-mentation, George S. Frater and Jeffrey A. Packer, ST Oct. 92, p2804-2820.

Tube joints

Analysis of Welded Tubular Connections Using Continu-um Damage Mechanics, William F. Cofer and Jihad S. Jubran, ST Mar. 92, p828-845.

Structural Efficiency of Internally Ring-Stiffened Steel Tubular Joints, D. S. Ramachandra Murthy, A. G. Madhava Rao, P. Gandhi and P. K. Pant, ST Nov. 92, p3016-3035.

Torsional Stresses in Tubular Lap Joints with Tapered Adherends, D. Chen and S. Cheng, EM Sept. 92, p1962-1973.

Beam-Column Behavior of Fabricated Steel Tubular Members, H. G. L. Prion and P. C. Birkemoe, ST May 92, p1213-1232.

Behavior of Partially Grout-Filled Damaged Tubular Members, S. Parsanejad and P. Gusheh, ST Nov. 92, p3055-3066.

p.303-3006.
Combined Natural Convection and Surface Radiation in the Annular Region Between a Volumetrically Heated Inner Tube and a Finite Conducting Outer Tube. S. E. Gianoulakis and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p805-812.

Comparative Evaluation of Plasticity Theories against Tension-Torsion Test at Finite Strain, Ali H. Al-Gadhib and Kerry S. Havner, EM Oct. 92, p2104-2126.

Constant Hole-Spacing Trail Tubes, S. T. Chu and H. M. Bagherzadeh, IR Jan./Feb. 92, p166-178.

Effect of Imperfections on Lattice Shells, Nicholas F. Morris, ST June 91, p1796-1814.

Morris, S.I. June 91, pt. 796-1814.
The Generalized Brazier Problem for Orthotropic Straight Tubes of Finite Length, C. W. Bert and A. Libai, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p872-875.
The Heartbeat of the Artery, David L. Druss and Burton P. Kassap, CE Jan. 92, p44-46.

Laboratory Testing of Ultimate Capacity of Dented Tu-bular Members, Einar Landet and Inge Lotsberg, ST Apr. 92, p1071-1089.

Local Buckling of Tubes in Elastic Continuum, James A. Cheney, EM Jan. 91, p205-216.

On-Orbit Chipless Cutting and Tube Welding in Space Station Freedom, William R. Wessels, Mitchell D. Mulder and Brace B. Daniel, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p815-826.

Optimum Design of Laminated Composites, R. S. Salzar, F. W. Barton and R. D. Ramsey, (Engineering Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1323-1334.

ressure Losses Across Sequential Stenoses in Collapsible Tubing, Maria Siebes and Binu John, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p832-835.

Sample Disturbance of Cemented Collapsible Soils, Sandra L. Houston and Mostafa El-Ehwany, GT May 91, p731-752.

Strength and Behavior of Slender Steel Pipe under Pre-stressing Force, Zenon A. Zielinski and Hamid Mobasher-Fard, ST Oct. 92, p2911-2926.

T-Joints in Rectangular Hollow Sections Subject to Combined Actions, Xiao-Ling Zhao and Gregory J. Hancock, ST Aug. 91, p2258-2277.

Tuned liquid dampers
Tuned Liquid Damper (TLD) for Suppressing Horizontal
Motion of Structures, Yozo Fujino, Limin Sun, Benito
M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p20172030.

A Case of the Shakes, Anthony C. Webster and Matthys P. Levy, CE Feb. 92, p58-60.

Control of Along-Wind Response of Structures by Mass and Liquid Dampers, Y. L. Xu, B. Samali and K. C. S. Kwok, EM Jan. 92, p20-39.

Frequency Domain Optimal Control of Wind-Excited Buildings, J. Suhardjo, B. F. Spencer, Jr. and A. Kareem, EM Dec. 92, p2463-2481.

TMDS for Vibration Control of Systems with Uncertain Properties, Hector Jensen, Mehdi Setareh and Ralf Peek, ST Dec. 92, p3285-3296.

Tuned Mass Dampers for Balcony Vibration Control, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p723-740.

Tuned Mass Dampers to Control Floor Vibration from Humans, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p741-762.

Using Component Mode Synthesis and Static Shapes for Tuning TMDs, Mehdi Setareh, Robert D. Hanson and Ralf Peek, ST Mar. 92, p763-782.

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384. Cofferdam is the Shape of Things to Come, CE Dec. 92,

p21-22.

Designing Reinforced Rock, John A. Bischoff, Stephen J. Klein and Thomas A. Lang, CE Jan. 92, p64-67. French System Tunnels Into Canada, CE Aug. 92, p10.

rrench System Tunnels Into Canada, CE Aug. 92, p10. The Heartbeat of the Artery, David L. Druss and Burton P. Kassap, CE Jan. 92, p44-46. Instructional Modules for Tunnel Design and Construction, Charles W. Schwartz, Herbert H. Einstein and Guillermo F. Salazar, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-375.

Limehouse Link Tunnel Project—London—A Case History, Patrick McCreight, David Scott and George Tamaro, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p65-90.

Metro Nearing Completion of Prototype Tunnel, CE Jan. 92, p14,16. Motown Tunneling, Paul Tarricone, CE Apr. 92, p60-61.

Preliminary Design for NATM Tunnel Support in Soil, Eric Leca and G. Wayne Clough, GT Apr. 92, p558-

Tunneling in the Urban Environment, Norman A. Nadel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p.172-180.

Tunnel linings

Epoxy Helps Builders Adhere to Schedule, CE Mar. 92, p88.

Experimental Photoelastic Analysis of Tunnels Containing Cracks, Adel Y. Akl, S. S. Abdel Salam, M. H. El Haddad and Gouda A. Mohamed, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p276-279.

Preliminary Design for NATM Tunnel Support in Soil, Eric Leca and G. Wayne Clough, GT Apr. 92, p558-

**Tunnel** supports

Jet Grouting: State-of-the-Practice, J. L. Kauschinger, E. B. Perry and R. Hankour, (Grouting. Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p169-181.

Temporary Tunnel Excavation Support by Chemical Grouting, Francis B. Gularte, Gary E. Taylor and Roy H. Borden, Grouting, Soil Improvement and Geographeteics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p423-435.

Tunnel Seepage Control by the Interior Grouting Method, Bruce A. La Penta, Reuben H. Karol and Charles H. Arnold, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p436-448.

Tunneling

Bored Tunneling for Singapore Metro, T. W. Hulme and A. J. Burchell, CO June 92, p363-384.

Building Protection from Tunneling in Downtown Los Angeles, Loring A. Wyllie, Jr. and John A. Dal Pino, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p107-118.

Building Response to Excavation-Induced Settlement, Marco D. Boscardin and Edward J. Cording, GT Jan.

87, pi-21.
87, pi-21.
Stephen J. Klein and Thomas A. Lang, CE Jan. 92, p64-67.
Mechanical Excavation of Roadways and Chambers in Hard Rock, Neil J. Dahmen and John Turner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, dioactive Waste 1 1992), p1507-1515.

Mining for Building Expansion, Richard M. Croswell, Robin B. Dill and John Booth, CE Dec. 92, p48-51.

KODIN B. Dill and John Booth, CE Dec. 92, p48-51.
Motown Tunneling, Paul Tarricone, CE Apr. 92, p60-61.
New York Water-Tunnel Section Finished After 22
Years, CE Sept. 92, p12.
Settlement Reduction by Soil Fracture Grouting, Mario J.
Pototschnik, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p398-409.
SSC Tunnel Job Awarded, but Janap Witholds Funds CF.

SSC Tunnel Job Awarded, but Japan Witholds Funds, CE Mar. 92, p14,16.

mar. vz., p.14,16.

TBM Performance Prediction in Yucca Mountain Welded Tuff From Linear Cutter Tests, Richard Gertsch, Levent Ozdemir and Leslie Gertsch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1516-1520.

p1316-1520. Trenchless Excavation Construction Methods: Classification and Evaluation, Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.), CO Sept. 91, p521-536. Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, Kalyan K. Bhattacharyya, Richard McDonald and Robert S. Saunders, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992) p1521-1526. 1992), p1521-1526.

Tunnel Grouting Record Pumped Up in Los Angeles, CE Feb. 92, p88.

Tunnelers Tackle NAFTA Markets, Privatization, CE Dec. 92, p18-19.

Tunneling in the Urban Environment, Norman A. Nadel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p172-180.

Tunneling Set to Begin on Boston Harbor Tunnel, CE Apr. 92, p12.

Tunnels
Balancing Hydraulic Requirements for Storage and Diversion in Planning Subsurface Facilities for the Control of Combined Sewer Overflows, Edward H. Burgess and Clinton J. Cantrell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p86-91.
Building Response to Excavation-Induced Settlement, Marco D. Boscardin and Edward J. Cording, GT Jan. 89, p1-21.

89, pl.-21.
Design Management and Stress Analysis of a Circular Rock Tunnel and Emplacement Holes for Storage of Spent Nuclear Fuel, Nadia Kandalaft-Ladkany and Richard V. Wyman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2260-2266.

Experimental Photoelastic Analysis of Tunnels Containing Cracks, Adel Y. Aki, S. S. Abdel Salam, M. H. El Haddad and Gouda A. Mohamed, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.276-279.

ed., 1992), p2/6-2/9.

A Face-Lift for Lincoln, Peter L. Rinaldi and Andrea Giorgi Bocker, CE Sept. 92, p62-64.

The Great Chicago Flood of 1992, Randall R. Inouye and Joseph D. Jacobazzi, CE Nov. 92, p52-55.

Preliminary Design for NATM Tunnel Support in Soil, Eric Leca and G. Wayne Clough, GT Apr. 92, p558-

The Reconstruction of the Morton Street Evacuation and Ventilation Shaft, Daniel M. Hahn, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p91-106.

Regulatory Considerations in Design of the Exploratory Studies Facility, Michael W. Parsons and Michael D. Voegele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p671-678.

Reinforced Soil-Cement Embankment, Safdar A. Gill and Ted D. Bushell, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1493-1504.

Three Dimensional Models in CADD, Cynthia Gagnon and Brian Baker, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p434-442.

Tunnel Takes Cathodic Protection, Guang-Nan Fanjiang, Michael Mazzuca, Lin Nathan and Robin Pawson, CE Nov. 92, p59-61.

Turbidity

Barbain States of Waves and Drawdown Generated by Barge Traffic on the Upper Mississippi River System, Ta Wei Soong and Nani G. Bhowmik, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p672-676.

Chemical Dosing of Small Water Utilities Using Regres-sion Analysis, Glenn W. Ellis, Anthony G. Collins, Xi Ge and Catherine R. Ford, EE May/June 91, p308-319.

Effects of Pre-Oxidation on In-Line Filtration: Particle and Manganese Removal, John E. Tobiason and Nagaraju K. Vinod, (Environmental Entineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p520-525.

Acration Using the Howell-Bunger Valve, D. D. Kraus and E. R. Hixson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p299-

Closed Cycle Ocean Thermal Energy Conversion, F. A. Johnson, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p70-108.

Neigar of Pneumatic Diffuser System, Steven C. Wilhelms, Charles W. Downer and Richard E. Price, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1055-1060.

and Ivan U. British and Reliability Analysis of a Wind Turbine Blade, Paul S. Veers, Herbert J. Sutherland and Thomas D. Ashwill, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p424-427.

Hydroturbine Cavitation Erosion, J. L. Gordon, EY Dec. 92, p194-208.

Novel Combined-Cycle Low-Temperature Engine Sys-tem, Joel H. Rosenblatt, EY Dec. 92, p209-223.

Numerical Prediction of Aeration in Hydroturbine Draft Tubes, M. Naghash and C. Bohac, (Hydraulic Engineering, 2nd a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p293-298.

Analytical Aerodynamic Investigation of Cable-Stayed Helgeland Bridge, Imre Kovacs, Holger S. Svensson and Elljarn Jordet, ST Jan. 92, p147-168.

Computation of Long-Term Three-Dimensional Hydro-dynamics of New York Bight, Keu W. Kim, David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p500.

Determining Velocity Gradient in a Flocculation Basin—A Case Study, Christopher H. Yu. (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 953-598.

Energy Loss at Combining Pipe Junction, Marc Serre, A. Jacob Odgaard and Rex A. Elder, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p766-771.

Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp.

Entrainment of Bed Sediment Into Suspension, N Garcia and Gary Parker, HY Apr. 91, p414-435.

Erosion of a Thin Lutocline Under Homogeneous Turbulence, Panagiotis D. Scarlatos, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p263-268.

Force on Slab Beneath Hydraulic Jump, Javad Farhoudi and Rangaswami Narayanan, HY Jan. 91, p64-82.

General Mechanism of Turbulence, Venxinong Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.

Influence of Gas Phase Turbulence on the Transport of Particles, Jennifer I. Sinclair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042.

Influence of Density on Circular Clarifiers with Baffles.

1992), p1039-1042.
Influences of Density on Circular Clarifiers with Baffles, Siping Zhou, J. A. McCorquodale and Z. Vitasovic, EE Nov./Dec. 92, p829-847.
Mixing, Dispersion, and Resuspension in Vicinity of Ocean Wastewater Plume, Libe Washburn, Burton H. Jones, Alan Bratkovich, T. D. Dickey and Ming-Su-Chen, HY Jan. 92, p38-58.
Modeling, Vertical Structure of Open-Channel Flows, Alan F. Blumberg, Boris Galperin and Donald J. O'Connor, HY Aug. 92, p119-1134.
Prediction Method for Local Scour by Warmed Cooling-Water Jets, S. Ushijima, T. Shimizu, A. Sasaki and Y. Takizawa, HY Aug. 92, p1164-1183.
Resistance in Flat-Bed Sediment-Laden Flows, D. A. Lyn, HY Jan. 91, p94-114.
Solving Turbulent Flows Using Finite Elements, John I. Finnie and Roland W. Jeppson, HY Nov. 91, p1513-1530.

1530.

Turbulence, and Energy Loss, at Combining Pipe Junctions, Marc Serre and A. Jacob Odgaard, (Engineering Mechanics, Loren D. Luttes, ed. and John M. Niedzwecki, ed., 1992), p388-392.

Turbulence Characteristics of Sediment-Laden Flows in Open Channels, D. A. Lyn, HY July 92, p971-988.

Velocity Profiles in Steep Open-Channel Flows, Akihiro Tominaga and Ichias Nezu, HY Jan. 92, p73-90.

Wind Cross-Spectrum Effects on Long-Span Bridges, N. P. Jones, A. Jain and R. H. Scanlan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p63-66.

Turbulent boundary layers

The Transverse Vortex in the Wall Regions of the Turbulent Boundary Layers in the Flows with Adverse Pressure Gradient, Q. X. Lian and T. C. Su, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p474-477.

Turbulent diffusion
Design of a Threshold Channel, Gregorio Vigilar, Jr. and
Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p729-734.

1734.
Hydraulic Geometry of Threshold Channels, Panayiotis Diplas and Gregorio Vigilar, HY Apr. 92, p597-614.
Model for Pollutant Transport by Eddy Simulation, E. R.
Holley, Y. C. Su, G. H. Ward and R. de Souza, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598.

Turbulent flow
Boundary Conditions for Sediment-Laden Flows, Marcelo H. Garcia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p404-

409.
409.
Computation of Turbulent Shear Flow Over Surface-Mounted Obstacle, Jiamming He and Charles C. S. Song, EM Nov. 92, p2282-2297.
Density Currents and Shear-Induced Flocculation in Sedimentation Tanks, D. A. Lyn, A. I. Stamou and W. Rodi, Hy June 92, p849-867.
Effects of Porous Bed on Turbulent Stream Flow above Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92, p1222-1240.
General Mechanism of Turbulence Wenzione Vana (Enception)

pl222-1240.

General Mechanism of Turbulence, Wenxiong Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.

Increasing Safety Downstream of Hydropower Facilities, Stephen E. Draper, CF Nov. 91, p239-250.

Momentum and Energy Coefficients Based on Power-Law Velocity Profile, Cheng-lung Chen, HY Nov. 92, p1371-1584.

Skimming Flow in Stepped Spillways, N. Rajaratnam, HY Apr. 90, p587-591.

Slip Velocity and Temperature Jump in Flow over Rough Surface, J. B. Zhang and V. H. Chu, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p604-607.

Turf grasses Frictional Resistance of Overland Flow on Tropical Turfed Slope, Yee-Meng Chiew and Soon-Keat Tan, HY Jan. 92, p92-97.

Turkey
Stochastic Modelling of Strong Ground Motions for the
Istanbul, Turkey Area from Seismic Data for the Surrounding Region, Kirsten L. Findell and Ahmet S.
Cakmak, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-

Turnkey projects Start-Ups, CE Aug. 92, p8.

Two phase flow Influence on the Transport of Particles, Jennifer L. Sinclair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042.

Numerical and Physical Modeling of Air Diffuser Plume, D. W. Machina, J. A. McCorquodale and J. K. Bewtra, EE Mar./Apr. 92, p253-267.

Two-dimensional
Computation of Turbulent Shear Flow Over Surface
Mounted Obstacle, Jianming He and Charles C. S.
Song, EM Nov. 92, p2282-2297.

Song, Em 1807, 52, p2262257.

Dynamic Response of Uncertain Two-Dimensional Structures, C. G. Bucher and C. E. Brenner, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p132-135.

plicit Equations of Motion of Discrete System of Disks in Two Dimensions, Oleg Vinogradov, EM Sept. 92, p1850-1858.

p1850-1858.
Two-dimensional flow
Real-Time Simulation and Visualization of 2-D Surface
Water Flow, H. C. Lin, N. L. Jones and D. R. Richards,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmis, ed., 1992), p335-340.
A Semi-Implicit Finite Difference Model for ThreeDimensional Tidal Circulation, Vincenzo Casulli and
Ralph T. Cheng, (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan
Blumberg, ed., Ralph Cheng, ed. and Craig Swanson,
ed., 1992), p620-631.

Two-Dimensional Flow in Embankments, Nazeer Ahmed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p636-641.

anu Ivani O. Bhownik, ed., 1992, pp. 0-41.
Two-Dimensional Hydraulic Analysis of the Owensboro
Bridge and Approaches, M. A. Ports, T. G. Turner and
D. C. Froeblich, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p280286.

286.

Two-dimensional models

2-D Evaporation and Root Extraction in an FEM, Richard G. Allen and Wigdan I. Ahmad, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p189-196.

Computer Analysis of the East Huntington Cable-Stayed Bridge, Hany J. Farran and William Lai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p687-694.

Control of Contaminant Transport in Estuaries, Nikolaos D. Katopodes, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p370-381.

Differential Motions in Sedimentary Valleys. Apostolos

Differential Motions in Sedimentary Valleys, Apostolos S. Papageorgiou, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992),

al and Geotechnical Renability, 1. R. Lin, vo., 1722), p400-403.

Field Verification of a Wave-Induced Current Model, Jane McKee Smith, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p95-104.

Hydrodynamic and Water Quality Modeling of Lower Green Bay, David J. Mark and Barry W. Bunch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p657-668. Improved Thermal Predictions in CE-QUAL-W2, Raymond S. Chapman and Thomas M. Cole, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p158-163.

Mesh-Generating Computer Program for the FESWMS-

of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p.158-163.

Mesh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.323-328.

Physical and 2-D Computer Models of Skimmer Curtain Effects on Lewiston Reservoir and Outlet Temperatures, Russ T. Brown, Gus Yates and Perry Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.507-513.

Steady-State Nonlinear Heat Transfer in Multilayered Composite Panels, Ahmed K. Noor and Lazarus H. Tenek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.539-542.

Two-Dimensional Analysis of Furrow Infiltration, T. Vogel and J. W. Hopmans, IR Sept./Oct. 92, p.791-806.

Two-Dimensional Circulation Modeling of the Pamlico River Estuary, North Carolina, G. L. Giese and Jerad D. Bales, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumbers, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p607-619.

Using a Dye Study for Defining Diffusion in a Water

Using a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

emote Automated Wave and Water Level Monitoring System Deployed at Agat Harbor, Guam, David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p898-907.

Housing Chernobyl Relocatees, William H. Claire, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p19-28.

Ultimate loads

Field Load Test on Full-Scale Reinforced Concrete
Frame, Tso-Chien Pan, Siu Tee Wong, Hee Kiat
Cheong and Kok Wai Phang, CF Aug, 92, p137-150.

Modified Stub-Girder Floor System: Full-Scale Tests, M.
Ahmad, E. Y. L. Chien and M. U. Hosain, ST Nov. 92,
p3222-3236.

Ultimate Bearing-Capacity Tests on Sand with Clay Layer, Masanobu Oda and Soe Win, GT Dec. 90, p1902-1906.

Ultimate Load Test of Slab-on-Girder Bridge, Baidar Bakht and Leslie G. Jaeger, ST June 92, p1608-1624. Ultimate Loads of Continuous Composite Bridges, John B. Kennedy and Mohamed Soliman, ST Sept. 92, p2610-2623.

Ultimate strength
Behavior of Partially Grout-Filled Damaged Tubular
Members, S. Parsanejad and P. Gusheh, ST Nov. 92,
p3055-3066.

psups-supen Design Aids for Reinforced Concrete Columns, Bao-Jun Sun and Zhi-Tao Lu, ST Nov. 92, p2986-2995. Effect of Strain Rate on Material Properties of Sheet Steels, M. Kassar and W. W. Yu, ST Nov. 92, p3136-3150.

Laboratory Testing of Ultimate Capacity of Dented Tu-bular Members, Einar Landet and Inge Lotsberg, ST Apr. 92, p1071-1089. Statistical Analysis of Slender Composite Beam-Column Strength, S. A. Mirza and B. W. Skrabek, ST May 92, p1312-1332.

Strength of Concrete-Filled Thin-Walled Steel Box Col-umns: Experiment, Hanbin Ge and Tsutomu Usami, ST Nov. 92, p3036-3054.

Structural Efficiency of Internally Ring-Stiffened Steel Tubular Joints, D. S. Ramachandra Murthy, A. G. Madhava Rao, P. Gandhi and P. K. Pant, ST Nov. 92, p3016-3035.

Ultimate strength design
Concrete Box Sections Under Biaxial Bending and Axial
Load, Cengiz Dundar, ST Mar. 90, p860-865.

Ultrasonic testing

The Application of Ultrasonic Surface Detectors to Hop-per Dredge Production Monitoring, Stephen H. Scott and Angela Freeman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1018-1023.

A Critique of the Ultrasonic Pulse Velocity Method for Testing Concrete, S. Popovics and J. S. Popovics, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p94-103.

Evaluation of Compressive Strength for High-Strength Concrete by Pulse Velocity Method, R. Sri Ravindrara-jah, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p115-126.

1992), p115-126.
Frequency Spectrum Analysis of Ultrasonic Testing Signal in Concrete, Wei-Du Li, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p104-114.
Innovations for NDT of Concrete Structures, Dennis A. Sack, Larry D. Olson and Gregory C. Phelps, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p519-531.
Laser Interferometric Characteristriction of Acoustic Fanis.

Laser Interferometric Characterization of Acoustic Emission Transducers, Douglas A. Bruttomesso and Laurence J. Jacobs, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.256-

Nondestructive Crack Identification by Acoustic Emis-sion Analysis and Ultrasonic Frequency Response, Masayasu Ohtsu and Yasunori Sakata, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p171-181.

Sonic NDE of Structural Concrete, Larry D. Olson, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p70-81.

A Theoretical Approach to Characterize Reinforced Concrete Using Stress Waves, J. S. Popovics, J. L. Rose and A. Pilarski, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p492-504.

Ultrasonic Wave Scattering by a Crack in a Composite Plate, W. M. Karunasena, A. H. Shah and H. D. Mair, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559.

Ultraviolet radiation

Some Considerations for Instrumentation for a Lunar-Based Solar Observatory, Raymond N. Smartt, (Engi-neering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1890-1901.

Treatment of Contaminated Groundwater Using Chemi-cal Oxidation, Mark E. Zappi, Beth C. Fleming and M. John Cullinane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), Jennings, e-pl 184-1189.

Uncertainty analysis

Uncertainty analysis
Accounting for Uncertainties in Pavement Response,
Milton E. Harr, (Road and Airport Pavement Response
Monitoring Systems, Vincent C. Janoo, ed. and Robert
A. Eaton, ed., 1992), pl-11.
Accounting for Uncertainty in Natural Systems, Milton
E. Harr, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), pl612-1616.
Analysis of Uncertainty in Geotechnical Site Investiga-

Analysis of Uncertainty in Geotechnical Site Investiga-tions, and Why, Milton E. Harr, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p755-758

An Approach for Incorporating Inflows Uncertainty in Management Models, Luis Vives, Jesús Carrera and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

Assessing Uncertainty of Unit Hydrograph, Yeou-Koung Tung and Bing Zhao, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p543-

548.
Codification of Design Load Criteria Subject to Modeling Uncertainty, Marc A. Maes, ST Oct. 91, p2988-3007.
Critical Buckling Load Statistics of an Uncertain Column, Garrett D. Jeong, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p563-566.
Derivation of Infiltration Equation Using Systems Approach, V. P. Singh and F. X. Yu, IR Nov./Dec. 90, p837-858.

p837-838.

Dynamic Response of Uncertain Two-Dimensional Structures, C. G. Bucher and C. E. Brenner, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p132-135.

Effect of Active Control to Structural Reliability, J. T. P. Yao and H. G. Natke, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p373-376.

Fatigue/Fracture Reliability and Maintainability of Structural Systems: A Method of Analysis, C. J. Kung and P. H. Wirsching, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p436-439.

p436-439.

First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Küureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p531-534.

Further Contributions to Reliability-Based Pile-Settlement Analysis, S. T. Quek, Y. K. Chow and K. K. Phoon, GT May 92, p726-742.

Hydraulic Risk of Flood Disaster Reduction at Dams, Shou-shan Fan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p549-556. 556

Implementing Uncertainty Treatment in Al Development Environment, Fabio Casciati and Debbie Liu, (Probabi-listic Mechanics and Structural and Geotechnical Relia-

billy, Y. K. Lin, ed., 1992, p.17-20.
Implications of Design Uncertainty in Benefit-Cost Analysis, Anand Prakash, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992.), p.120-

125. Improved First-Order Uncertainty Method for Water-Quality Modeling, Charles S. Melching and Sharath Anmangandla, EE Sept/Oct. 92, p791-805.
An Innovative Institutional Arrangement Which Incorporates the Risk Preferences of Water Users, Norman J. Dudley, (Risk-Based Decision Making in Water Resources V, Vacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p174-199.
Integrated Assessment of Acid-Deposition Effects on Lake Acidification, Edward S. Rubin, Mitchell J. Small, Cary N. Bloyd and Max Henrion, EE Jan/Feb. 92, p120-134.

Small, Cary N. Bloyd and Max Henrion, EE Jan./Feb. 92, p120-134.

International Survey of Levee Freeboard Design Procedures, Robert C. MacArthur and Teress Bowen MacArthur, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-574.

A Knowledge Based System with Uncertainty for the Soil, Chérif Boulemia, Daniel Boissier and Jihad Al-Hajjar, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p365-368.

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertainties of Sediment Transport Parameters, Carlos C. Carriaga and Larry W. Mays, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p526-531.

Model Uncertainty Representation in Geotechnical Reliability Analyses, Knut O. Ronold and Peter Bjerager, GT Mar. 92, p563-376.

Nitrate Risk Management under Uncertainty, Yong W. Lee, Mohamed F. Dahab and Istvan Bogardi, WR Mar./Apr. 92, p151-165.

Numerical Method for Finding Leaks in Pipe Networks, Ranko S. Pudar, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p809-815.

Optimal Irrigation Delivery System Design under Uncertainty, Timothy K. Gates, Abdulmohsen A. Alshaikh, Samir I. Ahmed and David J. Molden, IR May/June 92, p433-449.

Probabilistic Evaluation of Bearing Capacity of Shallow Foundations, Azm S. Al-Homoud, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p352-355.

Probabilistic Methods in Hydroproject Maintenance, Walter O. Wunderlich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p514-519.

Probabilisti Distribution for Benefit/Cost Ratio and Net

Probability Distribution for Benefit/Cost Ratio and Net Benefit, Yeou-Koung Tung, WR Mar/Apr. 92, p133-

uantifying Uncertainty in Site Characterization, Wil-liam J. Boyle, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

p216-219.
Response of Systems with Uncertain Parameters to Sto-chastic Excitation, H. Jensen and W. D. Iwan, EM May 92, p1012-1025.
Risk-Costs for Scour at Unknown Bridge Foundations, G. Kenneth Young, Stuart M. Stein and Roy Trent, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111.
Sail/Structure Seismic Investigation of Safety-Related

G. Bhowmik, ed., 1992), p1106-1111.

Soil/Structure Seismic Investigation of Safety-Related Structures, Samir J. Serhan and Chang Chen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p306-399.

Some Remarks on BK-Models for Fatigue Crack Growth, M. M. Rocha and G. I. Schuëller, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p316-319.

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, Nobuhiro Voshikawa, Shigeru Nakagari and Ladislav Fryba, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p328-331.

p328-331.

Stochastic Simulation and Optimization of Irrigation Canal Network Flows, Timothy K. Gates, Abdelmohsen A. Alshaikh and Samir I. Ahmed, Urrigation and Drainage: Saying a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p474-480.

Uncertainty and Reliability Analysis of Jacket Platform, A. Olufsen, B. J. Leira and T. Moan, ST Oct. 92, p2699-2715.

Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, Paul G. Ka-plan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1643-1646.

Uncertainty principles

Aversion to Epistemic Uncertainties in Rational Decision

Making: Effects on Engineering Risk Management, M.

Elisabeth Paté-Cornell and Paul S. Fischbeck, (Risk
Based Decision Making in Water Resources V, Yacov

Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Sta
khiv, ed., 1992), p200-218.

khiv, ed., 1992), p200-218.

Comparison of Optimization Formulations for Waste-Load Allocations, Donald H. Burn and Barbara J. Lence, EE July/Aug. 92, p597-612.

Dealing with Uncertainty: From Health-Risk Assessment to Environmental Decision Making, Anthony L. Cox, Jr. and Paolo F. Ricci, EY Aug. 92, p77-94.

Intersection Air Quality Analysis, John Zamurs, Robert Conway and Stephen S. Rosen, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p283-297.

Reliability of Controlled Structures Subject to Peal Po-

p23-297.

Reliability of Controlled Structures Subject to Real Parameter Uncertainties, B. F. Spencer, Jr., C. Montemagno, M. K. Sain and P. M. Sain, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p369-372.

The Role of Risk Analysis in Feasibility Studies of Water Resources Projects, Alvin S. Goodman, Lampros E. Bourodimos and Albert Machlin, (Risk-Baued Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p322-330.

Selection of Design/Build Proposal Using Fuzzy-Logic System, James H. Paek, Yong W. Lee and Thomas R. Napier, CO June 92, p303-317.

Session Summary—Behavioral, Social, and Institutional Aspects of Risk Analysis, Mitchell Small, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p355-357.

Structural System Design under Uncertainty Via Pareto Optimization, Dan M. Frangopol and Minoru Iizuka, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p551-554.

Uncertainty in Steady-State Liquefaction Evaluation Pro-cedures, Steven L. Kramer, GT Oct. 89, p1402-1419.

Developing a Civil Engineer for the 21st Century, Ronald W. Eck, El Apr. 90, p156-163.

Educating Engineers for the Future: Two Views, Richard H. McCuen and Andrew Olmstead, CE Feb. 92, p6,10.

Engineering for City Slickers, CE Feb. 92, p12

Engineering for City Stickers, CE Feb. 92, p12.
Instructional Modules for Tunnel Design and Construction, Charles W. Schwartz, Herbert H. Einstein and Guillermo F. Salazar, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-375.

p. 106-373. Integrating the Undergraduate Engineering Curriculum, Alice M. Agogino and Anthony R. Ingraffea, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p. 356-363.

New York Engineers Endow Alma Mater, CE Dec. 92, p8. NSF Coalitions Hope to Revolutionize Education, CE June 92, p24,27.

An Ocean Engineering Program for the 21st Century, L. S. Fletcher and J. E. Flipse, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p370-380.

Progressive Integration of the Personal Computer Into an Undergraduate Civil Engineering Curriculum, Thomas A. Lenox and Terry D. Hand, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p65-72.

1992, po5-12.

The Use of Computers as an Aid to Modular Learning in Civil Engineering, Richard N. Palmer and Gregory R. Miller, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p364-367.

eu. anu Jett R. Wright, ed., 1992), p364-367.

Use of Multimedia in a Sophomore Design Course, Mark
L. Valenzuela, Gregory G. Deierlein and Richard N.
White, (Computing in Civil Engineering and Geographie Information Systems Symposium, Barry J. Goodno,
ed. and Jeff R. Wright, ed., 1992), p229-236.

Why Four Years? Howard I. Epstein, El Apr. 91, p150154.

Underground construction

Contracting and Legal Issues, Robert A. Rubin and Jean-nette L. Molina, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p6-23.

Limehouse Link Tunnel Project—London—A Case History, Patrick McCreight, David Scott and George Tamaro, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p65-90.

ed., 1992), p65-90.

Opportunities and Constraints for the Innovative Geotechnical Contractor, Peter J. Nicholson and Donald A. Bruce, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p46-64.

Overview of Design and Construction in the Urban Environment, Thomas R. Kuesel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p1-5.

True Costs of Underground Construction Assessed at No-Dig '92, CE June '92, p12.

Underground Research: Here and There, Raymond L.

Underground Research: Here and There, Raymond L. Sterling, CE Dec. 92, p56-58.

Wastewater under Home Plate, Walter A. Bishop, Jr. and John S. Fraser, CE Oct. 92, p61-63.

Underground mines

Design Criteria for an Underground Lunar Mine, John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 183-1194.

Preliminary Design of an Underground Lunar Mine, Scott B. Berk and Brad R. Blair, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1171-1182.

Undergrouns survage Achievements Within the International INTRAVAL Pro-ject, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1414-1420.

Alternate Conceptual Model of Ground Water Flow at Yucca Mountain, Linda L. Lehman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p310-320

p310-320. Application of a Probabilistic System-Model Based Methodology for the Performance Assessment of Deep Underground Disposal of Nuclear Wastes, T. J. Sumerling and B. G. J. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1647-1657.

ment Program Committee, 1992, p104-1637.
Applications of Performance Assessment in Support of the Exploratory Studies Facility (ESF) Design, M. E. Fewell, S. R. Sobolik, J. H. Gauthier, L. E. Shephard and L. S. Costin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670.

Benefits of International Technical Collaboration, Thomas H. Isaacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1026-1039.

Corrosion Lifetime Assessment for Candidate Materials of Geological Disposal Overpack for High-Level Nuclear Waste Canisters—Perspective of R&D in Japan, Hidekazu Asano, Hisao Wakamatsu and Masatsune Akashi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1658-1669.

Coupled Heat and Moisture Transport Model for Under-ground Climate Prediction, G. Danko and P. Moussel-Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 9790-798.

A Decision Analysis of an Exploratory Studies Facility, M. W. Merkhofer and P. Gnirk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992). p650-656.

Design and Construction of Two Major Experiments at the URL. P. M. Thompson, B. H. Kjartanson and R. S. Read, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p1082-1089

Committee, 1928, p1082-1083.

Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, C. S. Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271.

gram Committee, 1992, p.203-271.

Deterministic and Probabilistic Performance Assessment Methods Applied to Radionuclide Migration Through Fractured Geologic Medium, A. B. Gureghian, Y.-T. Wu and B. Sagar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p985-993.

Deterministic Geologic Processes and Stochastic Modeling, Christopher A. Rautman and Alan L. Flint, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p1617-1624

Developing Conceptual Models for Performance Assessment of Waste Management Sites, Felicia A. Kerl, A. Sharif Heger and David P. Gallegos, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p502-509.

Diffusion of Carbon Dioxide and Iodine Through Yucca Mountain Tuffs—Effects of Temperature and Mois-sture Content, Tevfik Bardakci, Franklin G. King and Aject Singh, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p1946-1952.

Dissolution Rates of As-Received and Partially Oxidized Spent Fuel, W. J. Gray and L. E. Thomas, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1458-1464.

Early Evaluation of the Suitability of the Yucca Moun-tain Site, Jean L. Younker, Larry D. Rickertsen and Bruce R. Judd, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p517-524.

Engineered Barrier System Failure Modeling: A Statisti-cal Approach, Daniel B. Bullen, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p401-408.

An Evaluation of the Proposed Tests with Radioactive Waste at WIPP, Lokesh Chaturvedi and Matthew Silva, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p600-609.

Field Research Program for Unsaturated Flow and Trans-port Experimentation, V. C. Tidwell, C. A. Rautman and R. J. Glass, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p704-709.

Fingerprist Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluorescence, Daniel York Pharr, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 879, 584

Forecasting the Space-Time Stability of Radioactive Waste Isolation in Salt Formations, E. B. Anderson, A. I. Karelin, A. S. Krivokhatsiy and V. G. Savonenkov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2114-2121.

Geological Mappability of Bored Versus Drill and Blast Excavations for Radioactive Waste Repositories, Bjorn Nilsen and Levent Ozdemir, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1499-1506.

Gravity-Driven Fingering in Unsaturated Fractures, M. J. Nicholl, R. J. Glass and H. A. Nguyen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Impact of HLW Thermal Output on Repository Design,
J. L. Girotto, L. Chaudon and J. M. Hoorelbeke, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p779-783.

The Impact of Thermal Loading on Repository Performance at Yucca Mountain, Thomas A. Buscheck and John J. Nitao, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Pro-

gram Committee, 1992), p1003-1017.

The Implications of Episodic Nonequilibrium Fracture-Matrix Flow on Site Suitability and Total System Per-formance, John J. Nitao, Thomas A. Buscheck and Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p279-296.

In Situ Testing Program at the Waste Isolation Pilot Plant, T. M. Schultheis, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1090-1091.

Introductory Remarks for the International High-Level Radioactive Waste Conference Technical Session on Site Chracterization: Approaches, Concepts, Concerns, Philip S. Justus and Jane R. Stockey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p746-747.

Labeling of the Spent Fuel Waste Package, W. G. Cul-breth and A. K. Chagari, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p395-400.

Lessons Learned from the Performance Assessment of SKI Project-90, J. Andersson, K. Andersson, S. Norrby and S. Wingefors, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2109-2113.

Lessons Learned from Utility NRC Licensing Experience, Jay E. Silberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p679-684.

Mechanical Excavation of Roadways and Chambers in Hard Rock, Neil J. Dahmen and John Turner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Trogram Committee, 1992), p1507-1515.

Method to Inhibit Technetium Migration in a Geologic

https://display.inition.com/margation in a Geologic Repository, VirLynda Statler and William H. Ellis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1985-1990.

tive Waste Management Program Committee, 1992), p510-516.

Multi-Barrier, Copper-Base Containers for HLW Disposal, Dale T. Peters, Konrad J. A. Kundig, David F. Medley and Paul A. Enders, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p685-690.

Negotiating the Voluntary Siting of Nuclear Waste Facilities—An Impossible Mission Made Possible, Robert M. Mussler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1655-1566.

A New Methodology for Repository Site Suitability Evaluation, Ian Miller, Richard Kossik and Mark Cunnane, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p462-468.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program. Dinesh C.

Level Radioactive Waste Management Program Committee, 1992), p462-468.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, Dinesh C. Gupta, Jacob Philip, Loren J. Lorig and Asadul H. Chowdhury, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p212-219.

A Numerical Study of Water Percolation through an Unsaturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, C. F. Tsang, J. Noorishad and F. V. Hale, (High Level Radioactive Waste Management Program Committee, 1992), p304-309.

Occurrence of Metallic Phases in Spent Nuclear Fuel: Significance of Metallic Phases in Spent Nuclear Fuel: Significance of Metallic Phases in Spent Nuclear Fuel: Significance for Source Term Predictions for High-Level Waste Disposal, English C. Pearcy and Hersh K. Manaktala, (High Level Radioactive Waste Management Program Committee, 1992), p131-136.

Partitioning of Aqueous High-Level Wastes: State-of-the-Art Technology, Wallace W. Schutz, (High Level Radioactive Waste Management Program Committee, 1992), p1718-1723.

p1718-1723.

Prints-1/23.

Performance-Assessment Comparisons for a Reposition Containing LWR Spent Fuel or Partitioned/ Transmuted Nuclear Waste, R. W. Barnard and W. W.-L. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Trogram Committee, 1992), p1397-1403.

Putonium in Uranium Deposits: Natural Analogues of Geologic Repositories for Putonium-Bearing Nuclear Wastes, David Curtis, June Fabrika-Martin, Ruben Aguilar, Moses Attrep, Jr. and Fred Roensch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p338-344.

Preclosure Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. Johansen, L. Grondin and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p481-488.

Prediction of Geological and Mechanical Processes While Disposing of High-Level Waste (HLW) Into the Earth Crust, O. L. Kedrovsky and V. N. Morozov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.759-762.

Preliminary Analysis of Repository Operational Criteria, John P. Hageman, Asadul H. Chowdhury and Jerome R. Pearring, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992.) p1067-1018

Quantification of Uncertain Outcomes from Site Charac-terization: Insights from the ESF-AS, William J. Boyle, David K. Parrish and Phillip C. Beccue, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p657-664.

Regulatory Requirements to Address Issues Related to Volcanism and Magmatism: Code of Federal Regulations, Title 10, Part 60, Disposal of High-Level Radioactive Wastes in Geologic Repositories, John S. Trapp and Philip S. Justus, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2039-2046.

The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

mittee, 1992), p1429-1436.

The Role of Performance Assessment in Validation, Reg-ulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p99-101.

The Role of the Repository Implementer in Providing and Demonstrating Safe Disposal of Radioactive Wastes, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p102-105.

Semi-Analytical Treatment of Fracture/Matrix Flow in a Dual-Porosity Simulator for Unsaturated Fractured Rock Masses, R. W. Zimmerman and G. S. Bodvarson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p272-278.

Spent Fuel Characteristics Potentially Relevant to Repository Design Assessment, Michael G. Bale and Thomas A. Thornton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p116-121.

Spent Fuel Characteristics Provided by the CDB—An Update, K. J. Notz, R. Salmon, T. D. Welch, W. J. Reich and R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p122-130.

The Status of Yucca Mountain Site Characterization Activities, Carl P. Gertz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p748-750.

Summary of the Exploratory Studies Facility Alternatives Study, L. S. Costin, A. W. Dennis and A. L. Stevens, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p643-649.

Swedith High-Level Radioactive Waste Management Is-sues, Per-Eric Ahlström, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p33-40.

Swiss High-Level Radioactive Waste Management System Issues, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p25-27.

A System for Measuring Moisture Transients in Clay-Based Barrier Materials, A. W. L. Wan, B. H. Kjartan-son, M. H. Spinney, H. S. Radhakrishna and K.-C. Lau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1122-1128.

System Integration for the Disposal of Defense Transu-ranic Waste, Mark W. Frei, Joseph A. Coleman and Sandra Fucigna, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p409-415.

System Selection of Concepts for Direct Disposal of Spent Fuel, K. Einfeld, K. D. Closs and U. Knapp, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1860-1866.

mittee, 1992.) peoul-soo.
Technological Parameters of Underground Facilities for Long-Term Storage of High-Temperature Sources, O. L. Kedrovsky, I. Y. Shishchits and V. N. Vorobjev, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2410-2414.

Temperature Scenarios for a Repository at Yucca Mountain, Benjamin Ross, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p784-789.

Three Dimensional Visualization in Support of Yucca Mountain Site Characterization Activities, David W. Brickey, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p458-461.

Three-Dimensional Finite Element Modelling of Near-Field Contaminant Transport in a Nuclear Fuel Waste Disposal Vault, Tin Chan and Frank Stanchell, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p297-303.

Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, Kalyan K. Bhattacharyya, Richard McDonald and Robert S. Saunders, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1521-1526.

Uncertainty in Regulatory Decision-Making, D. Fehr-inger and S. Coplan, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p106-109.

- Uranyl Oxide Hydrates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, R. J. Finch and R. C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 232 237 p332-337.
- U.S. Department of Energy Issue Resolution Process, Maxwell B. Blanchard, Michael D. Voegele and Miguel A. Lugo, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1062-1066.

Use of Wingz Spreadsheet as an Interface to Total-System Performance Assessment, W. F. Chambers and A. H. Treadway, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493.

Validation of Safety Assessment Models as a Process of Scientific and Public Confidence Building, Shlomo P. Neuman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1404-1413.

Validation of System Models of Deep Geological Disposal of High-Level Nuclear Waste, Bjorn T. Cronhjort and Grant Sheng, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2122-2125.

Waste Isolation Pilot Plant Robotic Investigation and Study, T. M. Schultheis and J. R. Walls, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p960-965.

Water-Rock Interaction in New Zealand Hydrothermal Systems: Comparison of Some Simulated and Ob-served Geochemical Processes, William E. Glassley and Bruce W. Christenson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p352-356.

Yucca Mountain Digital Database, Carl R. Daudt, Charlotte Abrams and William J. Hinze, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p442-449.

Yucca Mountain Project Total-System Performance Assessment Preliminary Analyses: Overview, R. W. Barnard and H. A. Dockery, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p874-881. The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, Nona F. Shepard and Donald L. Champagne, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p593-599.

Underground structures
Cathodic Protection Diagnostics for Corrosion Mitigation of Infrastructure Components, Vicki L. Van Blaricum, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p137-144.
Design Criteria for an Underground Lunar Mine, John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1183-1194.

Underground Refrigeration Outlets, Clay Waseen, (Ports '92, David Torseth, ed., 1992), p682-694.
Wastewater under Home Plate, Walter A. Bishop, Jr. and John S. Frascr, CE Oct. 92, p61-63.

et Grouting in Airport Construction, Yoshiomi Ichihashi, Mitsuhiro Shibazaki, Hiroaki Kubo, Masahiro Iji and Akira Mori, Grouting, Soil Improve-ment and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193. Yoshiomi

Soilcrete Cut-Off Wall for Undercrossing a Busy Rail Line, Walter Steiner, Ernst Schneider and Manfred Cartus, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p384-397.

Building Protection from Tunneling in Downtown Los Angeles, Loring A. Wyllie, Jr. and John A. Dal Pino, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),

Building Underpinning Key to Penn Station Rehab, CE Oct. 92, p12-13.

Grouting Techniques for Excavation Support, Joseph P. Welsh, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-261.

Permanent Excavation Support and Underpinning in Sands: A Case History, Russell J. Morgan, Lawrence F. Johnsen and Franklin M. Grynkewicz, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p778-

Recent Progress in American Pinpile Technology, Donald A. Bruce, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p765-777.

Soils, Gary T. Brill and Kenneth E. Darnell, Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p791-802.

Underwater construction

Fly-Ash Slurry Island: I. Theoretical and Experimental Investigations, Sumio Horiuchi, Masataka Taketsuka, Takuro Odawara and Hiromi Kawasaki, MT May 92,

Fly-Ash Slurry Island: II. Construction in Hakucho Ohashi Project, H. Kawasaki, S. Horiuchi, M. Akatsu-ka and S. Sano, MT May 92, p134-152.

Submarine Flow Slide in Puget Sound, Leland M. Kraft, Jr., Thomas M. Gavin and Jon C. Bruton, GT Oct. 92, p1577-1591.

Underwater Slope Failure, Port Hueneme, W. H. Roth, D. T. Liu, M. Tischuk and T. Hjort, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p940-955.

Old Problems and New Challenges in Marine Geotechni-cal Engineering, Wayne A. Dunlap, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1051-1069.

Use of Manned Submersibles to Investigate Slumps in Deep Water Gulf of Mexico, Earl H. Doyle, Michael J. Kaluza and Harry H. Roberts, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p770-782.

Validation of the SEADYN90 Cable Simulation Model Using a Three-Dimensional Cable Deployment Data Set, Paul A. Palo, Linda C. Teragouchi and Maureen T. Smith, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p273-287.

Underwriting

Underwriting Process for Construction Contract Bonds, Jeffrey S. Russell, ME Jan. 92, p63-80.

Undrained shear tests

The Effective Stress Path for Soil at High Pressure, Jerry A. Yamamuro and Poul V. Lade, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p729-732.

Minimum Undrained Strength Versus Steady-State Strength of Sands, J. -M. Konrad, GT June 90, p948-

Stability of the Olga C Test Embankment, J. G. Lavallée, G. St-Arnaud, R. Gervais and Y. Hammamji, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992). p1006-1021

Uniaxial tensile strength

Cracking Response of RC Members Subjected to Uniaxi-al Tension, Gaetano Russo and Filippo Romano, ST May 92, p1172-1190.

Uniform flow

Uniform Aerated Chute Flow, Willi H. Hager, HY Apr. 91, p528-533.

Wind Effect on Oblique Motion of Two Bodies in a Uniform Flow, Allen T. Chwang and Ching-Jer Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedrwecki, ed., 1992), p353-356.

Uniformity

Calculating Flow in Manifold and Orifice System, Fazal H. Chaudhry and Luisa F. R. Reis, EE July/Aug. 92, p585-596

Design and Maintenance Factors Affecting Application Uniformity of Low Pressure Center-Pivot Irrigation Systems, Brian K. Briggs, K. James Fornstrom and Larry Pochop, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p257-262.

Irrigation Uniformity Relationships for Irrigation System Management, Albert J. Clemmens, IR Sept./Oct. 91, p682-699.

Substitutes for Leadership and Unionized Construction Carpenters, Mark O. Federle and William F. Maloney, CO June 92, p332-348.

Unit prices

Unit Pricing and Unbalanced Bids, Norman A. Nadel, CE June 91, p62-63. Unit-Price Contracts Allow Equitable Changes (ltr), Norman A. Nadel, CE May 92, p38.

United Kingdom

Application of a Probabilistic System-Model Based Meth odology for the Performance Assessment of Deep Un-derground Disposal of Nuclear Wastes, T. J. Sumerling and B. G. J. Thompson, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1647-1657.

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels, J. S. Grant, P. M. Boocock and C. J. Ealing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,

1992), p2227-2234.

Ouality Assurance at a High Level Waste Plant—The Successful Approval of WVP, Sellafield to BS5882/ ISO9002, Tim Houghton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p562-565.

Radiological Protection Criteria for Solid Radioactive Waste Disposal, J. R. Cooper, I. M. Barraclough and S. F. Mobbs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p237-242.

A Review of Current UK Techniques for Rehabilitating Water Mains, M. P. Jones, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p764-769.

The ACR Issue Resolution Process, David K. Zabransky, Michael S. Alissi and Michael H. Schwartz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p173-177.

pl 73-177.

An Analysis of Contingencies for Making Casks Available for Use During the Early Years of Federal Waste Management System Operations, P. E. Johnson, D. S. Johnson, D. G. S. Johnson, D. Johnson, D. S. John

gram Committee, 1992, p.190-2002.

An Assessment of the Transportation Costs of Shipping Non-Fuel Assembly Hardware to FWMS Facilities, L. B. Shappert, P. E. Johnson, D. S. Joy, R. E. Best and F. L. Danese, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.190-195.

The Behavior and Effects of the Noble Metals in the DWPF Melter System, Nick D. Hutson and Mike E. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p541-548.

Construction Challenges on Planetary Surfaces, H. A. Franklin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p458-468.

Aussell J. Minier, ed., 1992, p. 1938-408.

A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, K. Branch, N. Coburn, G. Curtis, J. Holm and S. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p156-160.

Current Perspectives on Performance Assessment at the NRC, S. M. Coplan, N. A. Eisenberg, M. V. Federline and John D. Randall, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2145-2150.

Data Bases About the Transportation of Radioactive Ma-terials, Cheryl Cashwell and James D. McClure, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p427-431.

Data Needs for Locating Emergency Response Units, George F. List, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p437-441.

The Design of a Permanent Lunar Research Station, James R. Thomas, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212.

The DOE Office of Environmental Restoration and Waste Management Comprehensive Integrated Planning Process, Richard J. Aiken, Cyril W. Draffin, Jr. and Karl T. Pflock, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1555-1558.

An Evaluation of Early Application of the Transuranic Burning Concept, E. Rodwell, R. A. Shaw and R. F. Williams, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1373-1380.

An Evaluation of the Proposed Tests with Radioactive Waste at WIPP, Lokesh Chaturvedi and Matthew Silva, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p600-609.

Experience with Spent Fuel Storage Licensing, Frederick C. Sturz, Ralph H. Sievers and John R. Stokley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p220-227.

Facility Interface Capability Assessment, Thomas E. Pol-log, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p178-182.

High-Level Waste Package Retrievability, Thomas W. Doering and David Stahl, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p362-365.

Impacts of Transportation Regulations on Spent Fuel and High Level Waste Cask Design, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p201-203.

mittee, 1972), p.01-203.

Implementation of the Department of Energy's New American Indian Policy within the Civilian Radioactive Waste Management Program, J. Bennett Easterling and Beth Berlin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p161-165.

Information Management for the Department of Energy Office of Civilian Radioactive Waste Management, Barbara A. Cerny, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2078-2082.

An Integrated Approach to Strategic Planning in the Civilian High-Level Radioactive Waste Management Program, William M. Sprecher, Jonathan Katz and Richard J. Redmond, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1559-1564.

An Interdisciplinary Approach to Learning and Teaching About Nuclear Waste Management, Roberta A. Scull, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1807-1812.

Launch Facilities as Infrastructure, Mike Trial, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2064-2071.

Licensing Issues: Clarification and Convergence, John P. Roberts, Linda J. Desell, Mary L. Birch, Lester Berkowitz and Joseph F. Bader, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236.

Lunar Habitats—Places for People, Robert Pfeifer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl83-188.

Metrication Between Canada and the USA—A Staged Adoption, George E. Maddox, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p590-593.

MRS Project Management, J. W. Doman and J. Vlahakis, (Fligh Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p1896-1902.

MRS Site Requirements and Considerations and the Pono site Requirements and Considerations and the Po-tential Influences of Specific Technology Selections, David F. Fenster, John A. Richardson and K. Michael Cline, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p204-211.

Multiple Booster Spaceports, Alan W. Arata, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2035-2043.

The Need for a True System Approach for High-Level Waste Management Systems Engineering Recommendations from the U.S. Nuclear Waste Technical Review Board, Dennis L. Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p822-826.

Negotiating the Voluntary Siting of Nuclear Waste Facili-ties—An Impossible Mission Made Possible, Robert M. Mussler, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p1565-1566.

gram Committee, 1992, p.130-1300.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, Dinesh C. Gupta, Jacob Philip, Loren J. Lorig and Asadul H. Chowdhury, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.212-219.

On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, David Lewis Feldman, High Level Radio oactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Our Aging Coastal Infrastructure, Joan Pope, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1055-1068.

P1035-1008.
A Pilot Scale Demonstration of the DWPF Process Control and Product Verification Strategy, Nick D. Hutson, Carol M. Jantzen and D. Chris Beam, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p525-532.

Preliminary Analysis of Repository Operational Criteria, John P. Hageman, Asadul H. Chowdhury and Jerow R. Pearring, *High Level Radioactive Waste Manage-*ment, High Level Radioactive Waste Management Pro-gram Committee, 1992, p. 1067-1087.

Probability and Climatology of Droughts in the Western United States, Hugo A. Loaiciga, (Water Resources Planning and Management: Saving a Threatened Resource In Search of Solutions, Mohammad Karamouz, ed., 1992), p119-129.

rogram Analysis and Compliance Management, Thomas row Woods and Dillard B. Shipler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1724-1729.

roposed Seismic Design Method for Piers and Wharves, Robert E. Harn and Bankim C. Mallick, (Ports '92, David Torseth, ed., 1992), p403-417.

Public Attitudes About Radioactive Waste, Ann S. Bisconti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

High Level Radioactive Waste Management Program Committee, 1992, pl 1-3. Rail Industry Trends Related to Waste Transportation, Ruth Maddigan, Marlene Owens and Paul Shelton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 330-1355.

Realizing Opportunity Horizons: DOE's Records Information Systems Design Efforts, Daniel J. Graser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2098-2105.

1992), p2098-2105.
Reappraising the Space Shuttle Program, Roger A. Pielke, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2220-2230.
Regulatory Law and Policy to Support Space Mining, Bruce S. Marks and William R. Sharp, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2208-2219.
Pilch Burierer, Can We Believe Port Piels Accessments?

Risky Business: Can We Believe Port Risk Assessments? John R. Harrald, Thomas A. Mazzuchi and Christo-pher M. Stone, (*Ports '92*, David Torseth, ed., 1992),

Roadmaps: An Effective Issue-Based Planning Process, Cyril W. Draffin, Jr. and A. Nick Suttora, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1567-1571.

ceuring Strategic National Security Objectives Through Maritime Activities, S. G. Phernambucq and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-

SEI In-Space Operations and Support Challenges, Ronald Caldwell, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 476-1487.

Should the U.S. Accept the Concept of Navigable Depth? John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Teeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082.

A. Hughes, ed., 1992), p1069-1082. Spent Fuel Characteristics Provided by the CDB—An Update, K. J. Notz, R. Salmon, T. D. Welch, W. J. Reich and R. S. Moore, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p12-130. Status of Infrastructure Studies and Results, Michael Conroy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p183-189.

Strategic Planning for Transportation Under the NWPA: A State Perspective, Douglas Larson and Jim Miernyk, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1730-1736.

Level Radioactive Waste Management Program Committee, 1992, p1730-1736.

Tethers and Their Role in the Space Exploration Initiative, Cheryl D. Bankston, John A. Gilbert and Dennis R. Wingo, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p897-908.

Towards a Spacefaring Civilization, Gordon R. Woodcock, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2008-2022.

Towards Confidence in Transport Safety: Demonstrating an Extraordinary Safety Program, R. W. Robison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Sterling, CE Dec. 92, p56-58.

Urban Nonpoint Source Control Strategies Outside North America, Wayne C. Huber, (Water Resources Planning and Management). Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p617-622.

Use of Annotated Outlines to Prepare Guidance for License Applications for the MRS and MGDS, John Roberts and William R. Griffin, (High Level Radioactive Waste Management). Program Committee, 1992), p1040-1046.

Utilization of ORIGEN2 by the Characteristics Data

Waste Management Program Committee, 1992), pl040-1046. Utilization of ORIGEN2 by the Characteristics Data Base, Tim D. Welch and Karl J. Notz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-

Water Data of the International Boundary and Water Commission, Conrad G. Keyes, Jr. and Kenneth N. Rakestraw, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ened Resource—In Sed., 1992), p584-589.

Water Pricing Policy in the United States: Task Commit-tee Report, Task Committee on Water Pricing Policy, (Neil S. Grigg, chmn.), (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

voca Mountain Digital Database, Carl R. Daudt, Char-lotte Abrams and William J. Hinze, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Civil Engineering Education in Ecuador, Oswald Ren-don-Herrero and Joseph H. Sherrard, El Oct. 92.

don-Herrero and Joseph H. Sherrard, El Oct. 92, p415-419.

ESCAPE: Small Payload Strategies, Morgan Jones, (Engineering, Construction, and Operations in Space III.

Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.

Miller, ed., 1992), p1542-1545.

A Novel University-Industry-Government Partnership,
Constantine N. Papadakis, Paul C. Claspy, Theo G.

Keith and Michael J. Saklind, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992),
p2128-2135.

Phobias and Underutilization of University Scientists: A

nobias and Underutilization of University Scientists: A Suggested Program, York T. Mandra, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p1799-1806.

Space Civil Engineering Option—A Progress Report, Marvin E. Criswell and Willy Z. Sadeh, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2136-2146.

Space Education Day D. O. Swint, M. E. McGuinness, W. R. Sharp, S. K. Swint, J. T. Curry, B. D. Bryart, I. A. Williar and S. Solari, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Struc, Sture, ed. and Russell J. Miller, ed., 1992), p21-47-2160.

Space Exposed Experiment Developed for Students, Doris K. Grigsby and Bob Melton, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992). p2161-2171.

Waste Caretakers: Who Will They Be? A. Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1485-1490.

Unsaturated flow

mittee, 1992., p.1463-1490.

Unsaturated flow
Accounting for Uncertainty in Natural Systems, Milton E. Harr, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1612-1616.
Comparative Survey of Four Unsaturated Soil Flow Equations, Abbas A. Fiuzat and David W. Moughton, HY May 92, p.786-791.
Comparison of Two Conceptual Models of Flow Using the TSA, Michael L. Wilson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program for Unsaturated Flow and Transport Experimentation, V. C. Tidwell, C. A. Rautman and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p704-709.
Flow and Transport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, In Che Yang, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p732-737.

Gravity-Driven Fingering in Unsaturated Fractures, M. J. Nicholl, R. J. Glass and H. A. Nguyen, (High Level Radioactive Waste Management Program Committee, 1992), p321-331.

Impact of Fracture Coatings on the Transfer of Water

p321-331.

p321-331.

Impact of Fracture Coatings on the Transfer of Water Across Fracture Faces in Unsaturated Media, David P. Gallegos, Steven G. Thoma and Douglas M. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p738-745.

The Invalidation of Faces of the Nonequilibrium Faceture.

Level Radioactive Waste Management Program Committee, 1992), p738-745.

The Implications of Episodic Nonequilibrium Fracture-Matrix Flow on Site Suitability and Total System Performance, John J. Nitao, Thomas A. Buscheck and Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p279-296.

A Numerical Study of Water Percolation through an Unsaturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, C. F. Tsang, J. Noorishad and F. V. Hale, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p304-309.

Semi-Analytical Treatment of Fracture/Matrix Flow in a Dual-Porosity Simulator for Unsaturated Fractured Rock Masses, R. W. Zimmerman and G. S. Bodvarson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p272-278.

Variations of Hydrological Parameters of Tuff and Soil, J. Variations of Hydrological Parameters of Tuff and Soil, J.

Variations of Hydrological Parameters of Tuff and Soil, J. S. Y. Wang, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p727-731.

Fractures: Water Entry Through the Surrounding Porous Matrix, R. J. Glass and D. L. Norton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 212, 732. p717-726.

p717-726.
X-Ray and Visible Light Transmission as Two-Dimensional, Full-Field Moisture-Sensing Techniques A Preliminary Comparison, V. C. Tidwell and R. J. Glass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1099-1110.

Unsteady flow

The Application of UNET to a Complex Channel Net-work, Marc C. Johnson, (Hydraulic Engineering: Sar-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1148-1153.

Computation Method for Regulating Unsteady Flow in Open Channels, Fubo Liu, Jan Feyen and Jean Berlamont, IR Sept./Oct. 92, p674-689.

Computer-aided Studies for the Optimum Regulation of a Channel Network, Roland Faeh and Géraud Soubrier, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1112-1117. POSMID: Evanded Highardt, Flow Dubble-Sween Equa-

EQSWP: Extended Unsteady-Flow Double-Sweep Equation Solver, Theodor Strelkoff, HY May 92, p735-742.

tion Solver, Theodor Strelkoff, HY May 92, p735-742.
Fully Coupled Unsteady Mobile Boundary Flow Model
(FCM), Luís R.P. Correia, Bommanna G. Krishnappan
and Walter H. Graf, HY Mar. 92, p476-494.
Gradual Development of Bores in Canal Systems, Theodor Strelkoff, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p456-461.
Identification of Control System for Canal with Night
Storage, Wytze Schuurmans, Robert Brouwer and
Peter Wonink, IR May/June 92, p360-369.
Kinematic Wave Controversy, Victor M. Ponce, HV Any.

Kinematic Wave Controversy, Victor M. Ponce, HY Apr. 91, p511-525.

Modeling Flow and Flood-Plain Storage in a Tidally Af-fected River, A. G. Strickkand and Jerad D. Bales, Hy-draulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1130-1136.

Steady and Unsteady Flow Profiles in Reclamation, Cur-tis 1. Orvis, (Hydraulic Engineering: Saving a Threat-ende Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p872-877.

Temporal Variation of Scour Around Circular Bridge Piers, Umesh C. Kothyari, Ramchandra J. Garde and Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.

Uplift

Effects of K<sub>0</sub> and Overconsolidation on Uplift Capacity,

Adel Hanna and Ashraf Ghaly, GT Sept. 92, p1449-

Estimating Uplift Capacity of Light Steel Roof System, R. A. LaBoube, ST Mar. 92, p848-852.

Experimental Study of Sliding Isolated Structures with Uplift Restraint, Satish Nagarajaiah, Andrei M. Reinhorn and Michalakis C. Constantinou, ST June 92, p1666-1682.

Fluctuating Uplift and Lining Design in Spillway Stilling Basins, Virgilio Fiorotto and Andrea Rinaldo, HY Apr. 92, p578-596.

Ground Anchorage Technology—A Forward Look, Stuart Littlejohn, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p39-62.

Stability of Concrete Gravity Dams with Drained and Fi-nite Cracks, Bernard Amadei and Tissa Illangasekare, EY Dec. 92, p149-163.

Uplift Behavior of Screw Anchors in Sand. I: Dry Sand, Ashraf Ghaiy, Adel Hanna and Mikhail Hanna, GT May 91, p773-793.

Uplift Capacity of Z-Purlins, Roger A. LaBoube, ST Apr. 91, p1159-1166.

Ambient Temperature Effect in Concrete Dam Founda-tion Seepage, E. C. Kalkani, GT Jan. 92, p1-11. Optimum Location of Drains in Concrete Dams, A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943.

Lirenin

Actinide Recycle and Waste Management, Marion L. Thompson and Ira N. Taylor, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1368-1372.

management Program Committee, 1992), p1368-1379. Application of Results from the Poocs de Caldas Project in the Kristallin-I HLW Performance Assessment, I. G. McKinley, W. R. Alexander, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p357-361.

A Comparison of Radionuclide Inventories Between the Direct-Disposal and the Acinide-Burning Cycles, Jorshan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1381-1386.

Tailings, Antonio Santos, José M. Martínez and Juan Luis Santiago, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p175-191.

Dissolution Rates of As-Received and Partially Oxidized Spent Fuel, W. J. Gray and L. E. Thomas, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1458-1464

Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, K. J. Riggle, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p2323-2330.

An Evaluation of Early Application of the Transuranic Burning Concept, E. Rodwell, R. A. Shaw and R. F. Williams, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1373-1380.

An Evaluation of the Proposed Tests with Radioactive Waste at WIPP, Lokesh Chaturvedi and Matthew Silva, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Silva, (Figh. Levet Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p600-609.

The Influence of Moisture on Air Oxidation of UO2: Calculations and Observations, Peter Taylor, Robert J. Lemire and Donald D. Wood, (High Level Radioactive Waste Management Program Committee, 1992), p1442-1448.

Oxidation of Spent Fuel in Air at 175\* to 1957. R. E. Einziger, L. E. Thomas, H. C. Buchanan and R. B. Stout, (High Level Radioactive Waste Management High Level Radioactive Waste Management Air Committee, 1992), p1449-1457.

Plutonium in Uranium Deposits: Natural Analogues of Geologic Repositories for Plutonium-Bearing Nuclear Wastes, David Curris, June Fabryka-Martin, Ruben Aguilar, Moses Attrep, Jr. and Fred Roensch, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p338-344.

The Potential Fate of Particulate Contaminants from the

1992), p338-344.
The Potential Fate of Particulate Contaminants from the Rehabilitated Ranger Uranium Mine, S. J. Riley and P. W. Waggitt, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p884-889.
Radioelements and Their Occurrence with Secondary Minerals in Heated and Unheated Tuff at the Nevada Test Site, S. Flexser and H. A. Wollenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1593-1598.

tive Waste Management Program Committee, 1772, pp193-1598.
Solubility of Uranyl in Brine, Hiromichi Yamazaki, Vassilios Symeopoulos, Bo Lagerman and Gregory R. Choppin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1607-1611.
Structural Credit for Depleted Uranium Used in Trasnport Casks, R. Salzbrenner, G. W. Wellman, K. B. Sorenson and P. McConnell, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2241-2248.

System Integration for the Disposal of Defense Transu-ranic Waste, Mark W. Frei, Joseph A. Coleman and Sandra Fucigna, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management

agement, High Level Radioactive Waste Management Program Committee, 1992), p409-415. Uranyl Oxide Hydrates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, R. J. Finch and R. C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p332-337.

Urban areas
Baltimore City Recycling Program—A Case History,
George G. Balog, Kenneth J. Strong and Elien L. Kobler, (Environmental Engineering: Saving a Threatened
Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p532-536.
Building Protection from Tunneling in Downtown Los
Angeles, Loring A. Wyllie, Jr. and John A. Dal Pino,
(Excavation and Support for the Urban Infrastructure,
T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),
p. 107-118

Calibration Strategy for Urban Catchment Parameters, Yaacob Ibrahim and Shie-Yui Liong, HY Nov. 92, p1550-1570.

Commercial Uses of Land Around Urban Railway Sta-tions in Greece, J. Tzouvadakis, UP Dec. 92, p119-127.

Construction Induced Vibration in Urban Environments, Barry M. New, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobel-man, ed., 1992), p212-239.

man, ed., 1993, p. 12-239.
Contracting and Legal Issues, Robert A. Rubin and Jean-nette L. Molina, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p6-25.

man, ed., 1992), pb-23.

CSO Rehabilitation Strategies for Urban Areas, Larry A.

Roesner and Edward H. Burgess, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p654-660.

Dinner Presentation, Robert D. Brenner, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992),

Drop Manholes in Supercritical Pipelines, George C. Christodoulou, IR Jan./Feb. 91, p37-47.

Effect of Drought on Urban Water Supplies. I: Drought Analysis, David M. Frick, Dennis Bode and Jose D. Sa-las, HY June 90, p733-753.

Lats, H. June v., p. 173-173.
Estimating Urban and Suburban Sewerage Flows with Assistance of GIS Technology, Paul Kirshen, Daniel Nvule and John Corliss, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992).

Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

8/26/2900-0, 2/2pp.
Excavation and Support Systems in Urban Settings, J. P. Gould, G. J. Tamaro and J. P. Powers, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171.
Frequency Based Control of Urban Blasting, Charles H. Dowding, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p181-211.
II. Too Deen, Robert A. Rubin and Jesnatte I. Molina.

In Too Deep, Robert A. Rubin and Jeannette L. Molina, CE Dec. 92, p67-69. Jefferson Parish Storm Water Management, Marnie Win-ter and Kent Dussom, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992).

p43/-461. Learning Rules for Driving Scenarios for an Urban Rail Corridor with Closely Spaced Stations, S. Khasnabis, T. Arciszewski and S. Khurshidul Hoda, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p983-990.

ec., 1992), p963-590. Levee/Floodwall Freeboard Design for an Urban Flood Control Project, Daniel B. Pridal and Edward F. Sing, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p803-808. Life-Cycle Considerations in Urban Infrastructure Engineering, David Novick, ME Apr. 90, p186-196.

Limehouse Link Tunnel Project—London—A Case History, Patrick McCreight, David Scott and George Tamaro, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992, p.65-90.

Microtunneling Used for Deep Urban Construction, CE Feb. 92, p26.

Feb. 92, p.26.

Mobilization and Removal of Contaminants Associated with Urban Dust and Dirt, Brian A. Dempsey, Yuan-Liang Tai and Stuart Harrison, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierre Linaweaver, ed., 1922, p.486–41.

Motown Tunneling, Paul Tarricone, CE Apr. 92, p.60-61.

On-Line Optimal Control of Urban Water Supply, Otto J. Helweg, Shahram Pezeshk and Kenneth E. Oliver, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p.532-536.

Opportunities for Improved Transportation Planning,

mad Raramouz, ed., 1992, p.532-536.

Opportunities for Improved Transportation Planning, John H. Suhrbier, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p.30-45.

Overview of Design and Construction in the Urban Environment, Thomas R. Kuesel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p.1-5.

Play Ball: Oriole Park at Camden Yards Set to Open, CE

Apr. 92, p15.

Reclaimed Water, Irrigation, and Conservation Pricing, Ronald E. Young, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p161-162.

p101-102.
Rehabilitation of Infrastructure in Infill Sites, Stephen Sussna, El Oct. 92, p381-387.
Rural-Urban Water Transfers in Nevada: Solution or Problem? John W. Fordham, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p492-497.

Karamouz, ed., 1992), p492-497. Stable Channel and Environmental Design Considerations for an Urban Flood Control Project, Edward F. Sing, Daniel Pridal and Thea Lane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p464-469.

Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A High-way Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992).

Tunneling in the Urban Environment, Norman A. Nadel, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),

p172-180.

Urban Nonpoint Source Control Strategies Outside North America, Wayne C. Huber, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p617-622.

Urban Transportation Management—Jersey City, New Jersey, Suzanne Mack and Thomas Marchwinski, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p143-147.

Urban Water Management in the 21st Century, Daniel A. Okun, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p150-160.

Urban development Accessibility of Public Services in Irbid, Jordan, Khaled Al-Sahili and Mohammad Aboul-Ella, UP Mar. 92,

CEs Help Rebuild Los Angeles, CE Aug. 92, p8.
Commercial Uses of Land Around Urban Railway Stations in Greece, J. Tzouvadakis, UP Dec. 92, p119-127.

Hong Kong Port Facilities, Airport, and Housing Require New Concepts, C. K. Chow, El Oct. 92, p403-414. Many Engineering Issues and Challenges Met in Develop-ment of Hong Kong, C. K. Chow, El Jan. 92, p60-70. Piles Over Problems Sites, Issa S. Oweis and Edward M. Zamiskie, Jr., CE Apr. 92, p62-64.

Positive Influence of Impact-Fee Policy in Urban Plan-ning and Development, Arthur C. Nelson, James E. Frank and James C. Nicholas, UP June 92, p59-64.

A Proposed Revised State Zoning Enabling Act, George W. Liebmann, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p91-100.

Century, Menmet man, ed., 1992), p91-100.
The Proposed Waste Management Plan for Dairy Farm
Wastes Polluting the Tangipahoa River and Lake
Pontchartrain, Gianna M. Jones, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweart, ed., 1992), p656-661.

Transportation for Hong Kong Requires Solutions to Issues and Problems, C. K. Chow, El July 92, p294-306.

Urban Development on Alluvial Fans, Lan-Yin Li Weber and Virginia Bax-Valentine, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p11-18

Urban planning
Estimating Functional Population for Facility Planning,
Arthur C. Nelson and James C. Nicholas, UP June 92,

p43-28. Integrating Facility Delivery through Spatial Information, Teresa M. Adams, Alan P. Vonderohe, Jeffrey S. Russell and James L. Clapp, UP Mar. 92, p13-23. Levels of Service Applied to Urban Streams, H. Rooney Malcom and Cynthia C. Lancaster, WR July/Aug. 91, 422-467.

Positive Influence of Impact-Fee Policy in Urban Plan-ning and Development, Arthur C. Nelson, James E. Frank and James C. Nicholas, UP June 92, p59-64.

Shortest Path Within Polygon and Best Path Around or through Barriers, Yihua Xiong and Jerry B. Schneider, UP June 92, p65-79.

Urben roads

Change Intervals and Lost Time at Single-Point Urban Interchanges, James A. Bonneson, TE Sept./Oct. 92,

pb31-530.

Discharge Capacity for Curb-Opening Inlets, Ali Uyumaz, HY July 92, p1048-1051.

Start-Ups, CE Dec. 92, pa. pa. perment—Jersey City, New Jersey, Suzanne Mack and Thomas Marchwinski, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p143-147.

Activities of the North Central Texas Council of Governments in Urban Storm Water Planning, John Promise and Samuel W. Brush, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

snail Jehnings, ed. and years of particles and Jehnings, p43-49.

Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G. Balog, William P. Stack, Kenneth T. Belt and Nathan J. Beil, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaever, ed., 1992), p498-503.

Design Discharge for Urban Stormwater Drainage, A. Osman Akan, (Hydraulie Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p713-718.

nings, ed. and Nani G. Bhowmik, ed., 1992), p713-718.
Land Use and Imperviousness Information Acquisition,
Ming T. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p363-368.
Liberty Reservoir Stormwater Retrofit Project, George G.
Balog, William P. Stack, Kenneth T. Belt and Prakash
Mistry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p346-351.
Rainfall-Runoff Relations for the Punet Sound Ares. P. S.

Rainfall-Runoff Relations for the Puget Sound Area, R. S. Dinicola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p890-894.

A Stochastic Water Quality Model for Urban Watersheds D. E. Barbé, J. F. Cruise and X. Mo, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search o Solutions, Marshall Jennings, ed. and Nani G Bhowmik, ed., 1992), p791-796.

DRIVETTING TO A CONTROL OF THE ACT OF THE AC

Urban Nonpoint Source Control Strategies Outside North America, Wayne C. Huber, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p617-622.

Katamouz, ed., 1992, pol-762.
USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, R. Brad Jennings, Tim H. Raines and Lucia G. Colangione, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p56-61.

Urban studies
Engineering for City Slickers, CE Feb. 92, p12.
Task Committee Report on Urban Hydrology Chapter,
David F. Kibler, A. Osman Akan, Christopher B.
Burke, Mark W. Glidden, Gert Aron, Richard H.
McCuen and Andrew J. Reese, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p725-728.

Urban transportation
Advanced Technology Applications in Chicago-Area
Freeway Traffic Management Program, Joseph M.
McDermott, TE May/June 92, p451-456.
Change Intervals and Lost Time at Single-Point Urban
Interchanges, James A. Bonneson, TE Sept./Oct. 92,
p631-650.

Development Impact Assessment with Transportation Models, John Loper and Robert C. Hazlett, Jr., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Robert E. Paaswell, ed., Nagui Robert E. Sutaria, ed., 1992), p233-237.

French System Tunnels Into Canada, CE Aug. 92, p10. Mass Transit Means Massive Savings, CE Mar. 92, p8.

Opportunities for Improved Transportation Planning, John H. Suhrbier, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p30-45.

Cuality, Roger L. Wayson, ed., 1992), p30-43. Transportation Planning Requirements of the Federal Clean Air Act Amendments (CAAAs) of 1990: A Highway Perspective, James M. Shrouds, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p14-29.

p1-27. Urban Transportation Management—Jersey City, New Jersey, Suzanne Mack and Thomas Marchwinski, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p143-147.

### Urbanization

Urbanization Accumulation Effects of Stormwater Management Deten-tion Basins, Robert G. Traver and Ronald A. Chadder-ton, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p925-930.

U.S. Army Corps of Engineers

The Application of Ultrasonic Surface Detectors to Hop-per Dredge Production Monitoring, Stephen H. Scott and Angela Freeman, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p1018-1023.

he Army Corps of Engineer's (ACE) Interaction with the Mission to Planet Earth Initiative, Robert C. Lozar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2094-2103.

CAD and the Corps, B. Ray Summerell, Kevin Carrigan and Jamie B. Wrenn, CE June 92, p52-54.

The Challenge of Kissimmee River Restoration, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p696-701. Corps Adds 12 Projects to Joint-Venture Program, CE Nov. 92, p27.

Corps Chooses Precast Panels for Lock Rehab, CE July 92, p19-20. Corps Seeks Industry Partners, CE Feb. 92, p12.

Corps to Restore Jersey Shore, CE Dec. 92, p10,13.

Corps Unveils New Levee Repair Method, CE Aug. 92, p19-20.

Development of a Phase I Prescriptive Reservoir Model, Robert D. Carl, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p667-

General Williams Named Chief of Army Corps of Engineers, NE Oct. 92, p4.

The Great Chicago Flood of 1992, Randall R. Inouye and Joseph D. Jacobazzi, CE Nov. 92, p52-55.

Joseph D. Jacobazzi, C.E. Nov. 92, p52-53.
Hampton, New Hampshire: Beach Nourishment Project,
Franklin W. Fessenden, (Coastal Engineering Practice
'92, Steven A. Hughes, ed., 1992), p60-72.
Hydraulic Structures Versus Zebra Mussels, John J. Ingram and Andrew C. Miller, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p606-611.

Land Reclamation Design for the Port of Los Angeles' 2020 Plan, J. Warwar and R. Wittkop, (Ports '92, David Torseth, ed., 1992), p577-590.

David Torseth, ed., 1992), p577-590.
Moving Toward a Probability-Based Risk Analysis of the Benefits and Costs of Major Rehabilitation Projects, Daniel B. Taylor, Keith D. Hofseth, Leonard A. Shab-man and David A. Moser, (Risk-Based Decision Mak-ing in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p148-

A New Chief for the Corps, CE Sept. 92, p11.

'Northeast' Conference Has National Implications, CE July 92, p12,14.

An Overview: Wetland Restoration, Protection, and Establishment by Beneficially Using Dredged Material, Mary C. Landin, Thomas R. Patin and Hollis H. Allen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl 14-118.

Proposed Development of South Central Florida Hydro-logic Ecosystem Model, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p707-711.

Revised Hydraulic Design of the Los Angeles County Flood Control System, Michael E. Mulvihill and Scott E. Stonestreet, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612-617.

Risk Assessment or Engineering Standards: Toward a De-cision Framework, Leonard Shabman, (Risk-Based De-cision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p40-51.

U.S. Army Corps of Engineers and Afghanistan's High-ways 1960-1967, Frank N. Schubert, CO Sept. 91, ways 1960 p445-459.

Using Price Adjustment Clauses to Reduce Risk, Michael C. Loulakis and William L. Cregger, CE Sept. 92, p40.

UTEXAS3 Example Problems, Earl V. Edris, Jr. and Dale F. Munger, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066.

Boulanger, co., 1926, proton.
Wetland Restoration and Creation Guidelines for Mitigation, Mary C. Landin, E. A. Dardeau, Jr. and Jerry L. Miller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p439-444.

# U.S. Geological Survey

Bridge Scour Data Management, Mark N. Landers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1094-1099.

Network Applications of the USGS Branch Model, Raymond W. Schaffranck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1159-1164.

Quake Clearinghouse Selected, CE June 92, p11.

United States Geological Survey Bridge Scour Evaluation Program in Texas, David D. Dunn and Henry R. Hejl, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p82-84.

and vani G. howmis, ed., 1972, po2-04.
USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, R. Brad Jennings, Tim H. Raines and Lucia G. Colangione, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p56-61.

Acquisition Issues, George W. Lackowitz, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p1031-1035.

Computer Vendor-User Relationships, Constantine N. Tonias and Elias C. Tonias, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1007-1014.

Positive Influence of Impact-Fee Policy in Urban Planing and Development, Arthur C. Nelson, James Frank and James C. Nicholas, UP June 92, p59-64.

User Fees: Who Pays and How Much?, CE Sept. 92, p19.

## USSR

ALWP-67: A Little-Known Big Nuclear Accident, N. G. Botov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2331-2338.

The German Participation in the Soviet MARS 94/96 Mission, Klaus Proetel, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2293-2304.

Materials Testing Aspects of the Problem of the Cherno-byl NPP 4th Unit's High-Level Radioactive Products Burial, E. B. Anderson, B. E. Burakov and E. M. Pasukhin, High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p2395-2398.

gram Committee, 1992), p2395-2398.

me Aspects Concerning the Design of High Level
Waste Vitrification and Storage Facilities, V. A. Kurnosov, M. V. Strakhov, V. T. Sorokin and A. E. Kozlov,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p2387-2394.

mittee, 1992.) p.281-2394. Technological Parameters of Underground Facilities for Long-Term Storage of High-Temperature Sources, O. L. Kedrovsky, I. Y. Shishchits and V. N. Vorobjev, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2410-2414.

Regarding Nature as Raw or Cooked, Margaret N. Max-ey, CE Oct. 91, p61-63.

The ACR Issue Resolution Process, David K. Zabransky, Michael S. Alissi and Michael H. Schwartz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p173-177.

p173-177.

Basic Planning and Design of a Water Utility Information System, Chun-Hou Orr, Bryan Coulbeck, Sergio T. Coelbo and Helena Alegre, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p340-345.
Cost of Rehabilitation of Water Distribution Systems, Peter K. Mac Ewen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p770-771.

Development of a Water Conservation Program for the

Development of a Water Conservation Program for the Spring Valley Water Company, Frank Gradilone, III., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p754-759.

Excavation and Support Systems in Urban Settings, J. P. Gould, G. J. Tamaro and J. P. Powers, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171.

Infrastructure Issue Overlooks Utilities, Kenneth L. Ferry, CE May 92, p39.

Ferry, CE May 92, p39.
An Integrated Representation of Form, Function and Behavior in Structural Engineering, D. H. Douglas Phan, Jamal A. Abdalla and H. Craig Howard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p394-401.

ec., 1992), p.394-401.
Knowledge Acquisition for an Expert System for Handling Customer Inquiries on Water Quality, Richard M. Males, Judith A. Coyle, Walter M. Grayman, Robert M. Clark, Harry J. Borchers and Beth G. Hertz, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992),

Novel Combined-Cycle Low-Temperature Engine Sys-tem, Joel H. Rosenblatt, EY Dec. 92, p209-223.

On-Line Optimal Control of Urban Water Supply, Otto J. Helweg, Shahram Pezeshk and Kenneth E. Oliver, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p532-536.

RW-859—A Key Link Between Government and Utili-ties, Mary Lee Payton and Kathleen Gibbard, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1281-1286.

Small Utility GIS, Didier Goubert and Robert Newton, CE Nov. 92, p69-71.

C.E. FUV. 74, p09-71.

A Storm Water Utility Case Study, Salt Lake City, Utah, Charles H. Call, Jr., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p792-797.

Universal Storage/Transport/Disposal Packages, Marvin L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p228-232.

Use of Interactive Simulation Environments for Evaluation of Water Supply Reliability, Larry M. Karpack and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p144-149.
Water Pricing Policy in the United States: Task Committee Report, Task Committee on Water Pricing Policy, (Neil S. Grigg, chmn.), (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p636-641.

Seatch of Soutions, Monammad Raramodz, ed., 1992), p636-641.

Vadose zone
Comparative Survey of Four Unsaturated Soil Flow Equations, Abbas A. Fiuzat and David W. Moughton, HY May 92, p786-791.

Effects of Soil Moisture and Physical-Chemical Properties of Organic Pollutants on Vapor-Phase Transport in the Vadose Zone, Say Kee Ong, Theresa B. Culver, Leonard W. Lion and Christine A. Shoemaker, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jeannings, ed. and Nani G. Bhowmik, ed., 1992), p176-179.

A Survey of Vadose Zone Flow and Transport Models, E. Zia Hosseinjour and Vincent M. Gorokhovski, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p186-191.

Vadose Zone Composite Hydraulic Conductivity, Shuttung Chu, IR Sept./Oct. 92, p822-827.

Water Quality Implications of Encapsulated Atrazine, Adel Shirmohammadi, Timothy J. Gish and Raviraj Vyravipiliai, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p425-430.

Validation

Borosilicate Glass (a,n) Sources Used With Origen-Type
Calculations, O.W. Hermann and R. Salmon, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee,
1992), p1272-1280.

Experimental Validation of a Probabilistic Fracture Mechanics Model, Mircea Grigoriu and A. R. Ingraffea,
(Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p443-446.

Ground Water Model Verification and Validation of
Ground Water Models, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p39-42. p39-42

p.39-42.
The International CHEMVAL Project: Verification and Validation of Geochemical Models, D. Read and T. W. Broyd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1421-1428.
Validation leaves Associated with Deformance Associated

righ Level Radioactive waste Management Program Committee, 1992), p1421-1428. Validation Issues Associated with Performance Assessment Modeling Activities for High-Level Radioactive Waste Repositories, Thomas J. Nicholson, Charles F. Voss and Johan Andersson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1437-1441. Validation of System Models of Deep Geological Disposal of High-Level Nuclear Waste, Bjorn T. Cronhjort and Grant Sheng, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2122-2125. Validation of the TEXSAN Thermal-Hydraulic Analysis Program, S. P. Burns and D. E. Klein, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p799-804.

p799-804.

Value engineering
Benefit-Cost Ratios: Failures and Alternatives, Jay R.
Lund, WR Jan./Feb. 92, p94-100.
Constructability and Constructability Programs: White
Paper, The Construction Management Committee of
the ASCE Construction Division, CO Mar. 91, p67-89.
Costs, Schedule Shrink as Airport Garage Expands, CE
Mar. 92, p10,12.
Deck Modules Speed Work, Cut Bridge Rehab Cost, CE
May 92, p10,12.
Peaches and Concrete, Housh Rahimzadeh and Mark B.

May 75, p10,12.

Peaches and Concrete, Housh Rahimzadeh and Mark B.

Haselton, CE Feb. 92, p42-44.

Value Engineering at a Superfund Site, Virendra Singh and Amy Monti, CE Mar. 92, p60-63.

Value Engineering in Coastal Design, Jack C. Cox, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p935-951.

Valves

Aeration Using the Howell-Bunger Valve, D. D. Kraus and E. R. Hixson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p299-304.

Controlling Pulsed Incompressible Flow, Richard Ian Stessel, EY Apr. 92, pl-17.

A Hydraulic Study of Venous Valve Closure, Shi-kang Wang, Yu-chen Qiu and Ned H. C. Hwang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p697-700.

Niedzwecki, ed., 1992), p697-700.
Leakage Characteristics of the St. Jude Heart Valve, Theresa E. Brandner and Yi-Ren Woo, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708.
Lumped Parameter Model for the Dynamics of the Pulmonary Circulation, B. B. Lieber, Z. Li and B. J. Grant, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p848-851.
Numerical Simulations of Disastolic Flow Patterns in a

and Jonn M. Niedzwecki, ed., 1992), p848-851.

Numerical Simulations of Diastolic Flow Patterns in a Model Left Ventricle with Varying Degrees of Mitral Stenosis, Richard T. Schoephoerster and Erick A. Gonzalez, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p968-971.

Spline Interpolations for Water Hammer Analysis, I. A. Sibetheros, E. R. Holley and J. M. Branski, HY Oct. 91, p1332-1351.

\$\text{State-Space Analysis}\$ and Control of Slow Transients in Pipes, Masashi Shimada, HY Sept. 92, p1287-1304.
\$\text{Systolic Anterior Motion of the Mitral Valve: In Vitro Flow Studies, Xavier P. Lefebvre, Shengqiu He, Robert A. Levine and Ajit P. Yoganathan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p701-704.

Estimation of Daytime Net Radiation Over Well-Watered Grass, A. Dong, S. R. Grattan, J. J. Carroll and C. R. K. Prashar, IR May/June 92, p466-479.

Variability

Case Studies of Semi-Closed Pipeline Systems for Flexi-ble Deliveries, John L. Merriam, (Irrigation and Drain-age: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p468-473. Fatigue Life of Offshore Steel Structures Under Stochas-

tic Loading, Henning Agerskov and Niels Thougard Pedersen, ST Aug. 92, p2101-2117.

Fundamental Frequency of Tapered Plates by Differen-tial Quadrature, Anant R. Kukreti, Jalaleddin Farsa and Charles W. Bert, EM June 92, p1221-1238.

and Charles W. Bert, EM June 92, pt 221-1239.

Impact of Variability in Pavement Parameters on Backcalculated Moduli, Jessica Rodriguez-Gomez, Carlos Ferregut and Soheil Nazarian, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p261-

Mechanics of Shape Optimization in Plate Buckling, Mahesh D. Pandey and Archibald N. Sherbourne, EM June 92, p1249-1266.

Mixing and Delivery of Roller Compacted Concrete, Robert Oury and Ernest Schrader, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p242-257.

McLean, ed., 1992), p.242-237.
Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflectograph, Wim Th. Hoyinck and Joop van Zwieten, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p63-77.

Review of Geostatistics in Geohydrology: I. Basic Concepts, ASCE Task Committee on Geostatistical Techniques in Geohydrology of the Ground Water Hydrology Committee of the ASCE Hydraulics Division, HY May 90, p612-632.

Variability Response Functions and Stochastic Field Dis-cretization in Stochastic Finite Element Methods, Tsuyoshi Takada, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., tural and George 1992), p116-119.

Variations in Measured Resilient Modulus of Asphalt Mixes, Faisal H. Al-Sugair and Jamal A. Almudaiheem, MT Nov. 92, p343-352.

618

Wariance analysis
Multivariable Analysis Using Isoparametric Finite Elements, Ping Wang and William K. Rule, EM Aug. 92, p1730-1737.

p1730-1757.
Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, Julio E. Pulido, Timothy L. Jacobs and Edison C. P. Lima, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p507-510.

Vector analysis

Vector analysis
Experiences in Using C++ to Develop a Next Generation
Strong Shock Wave Physics Code, James S. Peery and
Kent G. Budge, (Computing in Civil Engineering and
Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p527-534.
Mathematical Characterization of Fabric and Its Use in
Mcchanics of Geomaterials, B. Muhunthan and J. L.

Chameau, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p725-728.

Vegetation
Biotechnical Stabilization of Cut & Fill Slopes, Donald H.
Gray and Robbin B. Sotir, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1395-1410.
Biotechnical Stabilization of Highway Cut Slope, Donald H. Gray and Robbin B. Sotir, GT Sept. 92, p1395-

1409.
Continuum Model for Flows in Emergent Marsh Vegetation, Lisa C. Roig and Ian P. King, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p268-279.
Equation for Evaportanspiration
Conversions, Richard L. Snyder, IR Nov/Dec. 92,

p977-980.

Evaluation of Palmiter Erosion Remediation Techniques—A Case Study, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p660-665.
Field-Measured Hydraulic Resistance Characteristics in Vegetation-Infested Canals, Mohamed F. Bakry, Timothy K. Gates and Ahmed F. Khattab, IR Mar/Apr. 92, p256-274.

p236-274.

Flow Capacity through Wide and Submerged Vegetal Channels, M. W. Abdelsalam, A. F. Khattab, A. A. Khalifa and M. F. Bakry, IR Sept./Oct. 92, p724-732.

Modern Approach to Design of Grassed Channels, N. Kouwen, IR Sept./Oct. 92, p733-743.

Predicting Influence of Bank Vegetation on Channel Capacity, Richard Masterman and Colin R. Thorne, HY July 92, p1052-1058.

Vehicle usag

venicle usage Characteristics of MOBILE4 and EMFACTE Models, Ju-lie Fieber, Barbarra Austin and Jeremy Heiken, (Trans-portation Planning and Air Quality, Roger L. Wayson, ed., 1992), p255-570.

ed., 1992), p255-3/0.

Instrumentation for Vehicle Mobility Testing in the Frost Effects Research Facility, Elisabeth Berliner and Sally Shoop, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p12-26.

In-Use Emissions with Today's Closed-Loop Systems, Harold M. Haskew and Thomas F. Liberty, (Transpor-tation Planning and Air Quality, Roger L. Wayson, ed., 1992), p219-254.

VMT for Air Quality Purposes, Christopher R. Fleet and Patrick DeCorla-Souza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p126-141.

Designing Articulated Vehicles for Low-Speed Maneuver-ability, H. F. Chen and S. A. Velinsky, TE Sept./Oct. 92, p711-728.

92, p711-728.
Experimental Study of Underground Exploration by Auger Boring on a Mars Rover, Masaki Kojima, Kenji Saitou, Yutaka Kaneko and Nobuki Kawashima, Kengineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p416-426.
Lunar Surface Mining Equipment Study, Egons R. Podnieks and John A. Siekmeier, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1104-1115.

Outpost Service and Construction Robot (OSCR), Steven Kent, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1454-1463.

Russell J. Miller, ed., 1992), p1454-1463.

Planning for Movement of Very Large, Slow-Moving Vehicles, John Morrall, Walid Abdelwahab and Al Werner, TE May/June 92, p381-390.

The Small Mars Rover, A. L. Kemurdjian and V. V. Gromov, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Slein Sture, ed. and Russell J. Miller, ed., 1992), p390-397.

Systems Integration of Lunar Campsite Vehicles, Stephen Capps and Theron Ruff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1976-1987.

Testing Photoelectric Sensor System to Classify Vehicles, J. L. Gattis and Clyde E. Lee, TE May/June 92, p457-471.

471.

471.
Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992, 0-87262-815-9, 374pp.
Uses for Lunar Crawler Transporters, Richard A. Kaden, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389.
Vehicle Classification Using Infrared Image Analysis, Yean-Jye Lu, Yuen-Hung Hsu and Xavier Maldague, TE Mar/Apr. 92, p223-240.
Wheel Loads from Highway Bridge Strains: Field Studies, Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771.

# Vehicular traffic

reascuss traffic Cable-Stayed Bridge Vibration Due to Road Surface Roughness, Ton-Lo Wang and Dongzhou Huang, ST May 92, p1354-1374. Developing Protocols for Motor Vehicle Air Quality Modeling, Peter H. Guldberg, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p306-314.

p306-314.

Dynamic Response of Multigirder Bridges, Ton-Lo Wang, Dongzhou Huang and Mohsen Shahawy, ST Aug. 92, p2222-2238.

Estimation of Travel Related Inputs to Air Quality Models, Terry L. Miller, Arun Chatterjee, Jerry Everett and Cindy McIlvaine, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125.

IVHS Advances in Chicago, CE Mar. 92, p17-18.
Japan Leads World in IVHS Progress, CE Jan. 92, p25-126.

Using Geographic Information Systems for Traffic Control Inventory Management, Gary S. Spring, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl-8.
 YMT for Air Quality Purposes, Christopher R. Fleet and Patrick DeCorla-Souza, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), pl26-141.

# Velocity

Velocity
Characteristics of U.S. Geological Survey Discharge
Measurements for Water Year 1990, Janice M. Fulford,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p452-457.
Characteristics of Waves and Drawdown Generated by
Barge Traffic on the Upper Mississippi River System,
Ta Wei Soong and Nani G. Bhowmik, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p672-676.
Dracy-Weisbach Roughness Coefficients for Gravel and
Cobble Surfaces, John E. Gilley, Eugene R. Kottwitz
and Gary A. Wieman, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p747-752. p747-752.

p141-132.

Drag Coefficient and Fall Velocity of Nonspherical Particles, Prabhata K. Swamee and Chandra Shekhar P. Ojha, Hy May 91, p660-667.

Effects of Porous Bed on Turbulent Stream Flow above Bed, Cesar Mendoza and Donghuo Zhou, HY Sept. 92, p1222-1240.

Eigenproperties of a Twisted, Nonuniform Rotating Beam by the Finite Element Method, Alan G. Hernried and Wei-Ming Bian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p924-927.

Estimating Wave-Induced Bottom Velocities at Vertical Wall, Steven A. Hughes, WW Mar/Apr. 92, p175-192. Flow Impingement Velocities, Snake River, Wyoming, Stephen T. Maynord, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p139-

144.
Flow Visualization of Lid-Driven Cylindrical Cavity Flow, You-Gon Kim and Ching-Jen Chen, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p393-396.

Hypervelocity Impact Penetration Phenomena in Alumi-num Space Structures, William P. Schonberg, AS July 90, p173-185.

Measurement of Airfield Pavement Response Under Moving Aircraft Loads, Dennis R. Hiltunen and Albert J. Bush, Ill., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p336-351.

A. Eaton, ed., 1992), p336-351.

Mesh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p323-328.

A Method for Relating Impacts with Yielding and Unyielding Targeits, D. J. Ammerman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2255-2259.

Multivariable Analysis Using Igonarametric Finite Electric Program Committee, 1992), p225-2259.

Multivariable Analysis Using Isoparametric Finite Elements, Ping Wang and William K. Rule, EM Aug. 92, p1730-1737.

Proposed Similarity Law for Surface Velocity in Hydrau-lic Models, Dajin Yu and Weijun Zhao, HY Sept. 92, p1318-1325.

Roll-Waves on a Non-Newtonian Mud Layer, Chiu-on Ng and Chiang C. Mei, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p892-

Similarity Solutions of Starting Jets and Starting Plumes, Vincent H. Chu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p600-

Silip Velocity and Temperature Jump in Flow over Rough Surface, J. B. Zhang and V. H. Chu, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1932), p604-607.

A Sphere Moving Down an Inclined Bumpy Surface, Chy-an-Deng Jan, Hsieh Wen Shen, Chi-Hai Ling and Cheng-lung Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-

771. Unit Hydrograph Derivation Using Geographic Information System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12. Verification of a 3-D Hydrodynamic Numerical Model, David Daniel Abraham, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p225-230.

Velocity distribution

Floring Sassed Velocity Distribution Model in Study of Distribution of Suspended-Sediment Concentration, Chao-Lin Chiu and Corey A. Rich, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p520-525.

Momentum and Energy Coefficients Based on Power-Law Velocity Profile, Cheng-lung Chen, HY Nov. 92, p1571-1584.

Proposed Similarity Law for Surface Velocity in Hydrau-lic Models, Dajin Yu and Weijun Zhao, HY Sept. 92, p1318-1325.

Return Flows in Large Rivers Associated with Navigation Traffic, Nani G. Bhowmik, B. S. Mazumder and Ta Wei Soong, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p760-765.

Stress Strain Relation in Debris Flow Analysis, Chi-Hai Ling, Cheng-lung Chen and Chyan-Deng Jan, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852.

Variation of Velocity Distribution along Nonuniform Open-Channel Flow, Chao-Lin Chiu and David W. Murray, HY July 92, p989-1001.

Vedernikov's Number as a Measure of Flow Stability, Cheng-lung Chen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p753.

Velocity Distribution in Uniform Sediment-Laden Flo Motohiko Umeyama and Franciscus Gerritsen, HY Feb. 92, p229-245.

Velocity gradient

Determining Velocity Gradient in a Flocculation Basin—A Case Study, Christopher H. Vu, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p593-598.

Velocity Gradient in Filter Backwashing, Mustafa Turan, EE Sept./Oct. 92, p776-790.

Velocity head

Vesocity nead Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-256.

Velocity profile

Application of NMR to Rotating Granular Flow, M. Nak-agawa and E. K. Jeong, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p644-647.

p644-647.

Modeling Vertical Structure of Open-Channel Flows,
Alan F. Blumberg, Boris Galperin and Donald J.
O'Connor, HY Aug. 92, p1119-1134.

Pulmonary Artery Velocity Profiles in Young Lambs, Belinda Ha, Hiroshi Katayama, Robert Krzeski, Carol L.
Lucas, G. William Henry, Patricia Lynch, Ajit P. Yoganathan, Jose I. Ferreiro and Benson R. Wilcox, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p836-839.

Velocity Distribution Inside and Above Branched Flexi-

Velocity Distribution Inside and Above Branched Flexi-ble Roughness, Omnia El-Hakim and Mohamed M. Sa-lama, IR Nov./Dec. 92, p914-927.

Velocity Profiles in Steep Open-Channel Flows, / Tominaga and Jehisa Nezu, HY Jan. 92, p73-90.

Coupled Heat and Moisture Transport Model for Under-ground Climate Prediction, G. Danko and P. Mousset-Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p

Design and Licensing of the VSC Dry Fuel Storage Sys-tem, Art J. McSherry, John V. Massey and Boris A. Chechelnistky, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992, pl 216-1220.

Kessler, John V. Massey and Henry H. Tran, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2047-2055.

Verification inspection

A Pilot Scale Demonstration of the DWPF Process Control and Product Verification Strategy, Nick D. Hutson, Carol M. Jantzen and D. Chris Beam, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 635-635. p525-532.

The Role of Natural Analogues in Performance Assessment: Applications and Limitations, Rodney C. Ewing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1429-1436.

Vertical cylinders

Nonlinear Diffraction of Random Waves by a Vertical Cylinder, Ahsan Kareem, C. C. Hsieh and A. N. Williams, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p459-462.

Three-Dimensional Scattering of Solitary Waves by Verti-cal Cylinder, Keh-Han Wang, Theodore Y. Wu and George T. Yates, WW Sept./Oct. 92, p551-566.

Vertical drains

Inverse Analysis of Geotechnical Parameters on Improved Soft Bangkok Clay, Dennes T. Bergado, Apollo S. Enriquez, Casan L. Sampaco, Marolo C. Alfaro and A. S. Balasubramaniam, GT July 92, p1012-1030.

Site Improvement for a Steel Mill Complex, Eun C. Shin, Bang W. Shin and Braja M. Das, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-

A More Rational Approach to Pavements, Milton E. Harr, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992),

On the Diffusional Stress Transmission, Włodzimierz Brzakała, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p175-178.

Probability of Wave Force on Horizontal Members, Laurence Z. H. Chuang and C. C. Tung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p467-480.

Vertical Sediment Distribution, Jin Ren Ni and Guang Qian Wang, HY Sept. 91, p1184-1194.

Wave Slamming on a Horizontal Circular Cylinder, Mi-chael Isaacson and Sundar Prasad, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992),

Vertical loads

Column Design in Steel Frames under Gravity Loads, Oscar de Buen, ST Oct. 92, p2928-2935.

Improved Design Procedures for Vertically Loaded H-Piles in Sand, Harry M. Coyle and Ronald Ungaro, GT Mar. 91, p507-528.

An Alternative Analysis of Vibration Tests on Two Pile Group Foundations, Alex Sy, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p136-152.

Analysis of Behavior of Earth Dam Using Strong-Motion Earthquake Records, Mourad Zeghal and Ahmed M. Abdel-Ghaffar, GT Feb. 92, p266-277.

Analytical Aerodynamic Investigation of Cable-Stayed Helgeland Bridge, Imre Kovacs, Holger S. Svensson and Elljarn Jordet, ST Jan. 92, p147-168.

A Case of the Shakes, Anthony C. Webster and Matthys P. Levy, CE Feb. 92, p58-60.

Case Studies of Structures with Man-Induced Vibrations, H. Bachmann, ST Mar. 92, p631-647. Computation of the Least Eigenvalue on a Memory-Sharing Multiprocessor Computer, Jenn-Ching Luo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p754-761.

Construction Induced Vibration in Urban Environments, Barry M. New, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p212-239.

Damage Diagnosis of Steel Frames Using Vibrational Sig-nature Analysis, G. C. Yao, K. C. Chang and G. C. Lee, EM Sept. 92, p1949-1961.

Design Live Loads for Coherent Crowd Harmonic Move-ments, A. Ebrahimpour and R. L. Sack, ST Apr. 92, p1121-1136.

Design of Wave Barriers for Reduction of Horizontal Ground Vibration, Tahmeed M. Al-Hussaini and Shahid Ahmad, GT Apr. 91, p616-636.

Shanto Animate, OT App. 19, 19010-39.

Besign/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, J. M. Sloss, I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137.

Destabilizing Effect of Magnetic Damping in Plate Strip, Jong S. Lee, EM Jan. 92, p161-173.

Dynamic Experiments on Two Pile Groups, H. El-Marsafawi, Y. C. Han and M. Novak, GT Apr. 92,

p576-592.

Dynamic Soil-Pile-Structure Interaction—The State-of-Practice, Asadour H. Hadjian, Richard B. Fallgren and Mark R. Tufenkjian, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p1-26.

Dynamic Stability of Composite-Material Circular Cylindrical Shells with Orthogonal Stiffeners, C. W. Bert, C. D. Kim and V. Birman, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p652-655.

Effect of Soil Treatment on Dynamic Response of Foundations, M. H. Maher and J. P. Welsh, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p855-

866.

Effects of Multiple Modes on Rayleigh Wave Dispersion Characteristics, Kohji Tokimatsu, Shuji Tamura and Hisaya Kojima, GT Oct. 92, p1529-1543.

Elastic Stability of Heavy Rotating Columns, C. M. Wang, EM Jan. 90, p234-239.

Evaluating Damage Detection in Bridges, David F. Mazurek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p944-947.

Finite-Strip Free-Vibration Analysis of Wood Floors, A. Filiatrault, B. Folz and R. O. Foschi, ST Aug. 90, p2127-2142.

Eirst and Second Order Dynamic Subgrade Models for

p2127-2142.
First and Second Order Dynamic Subgrade Models for Soil-Pile Interaction Analysis, Toyoaki Nogami, Jiang-Xiong Zhu and Takayoahi Ito, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p187-206.
First-Excursion Probability of Uncertain Structures, Yan Zhang and Armen Der Kiureghian, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p531-534.
Flexible Plates for Control of Stress Distribution, Nenad Gucunski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p592-595.
Forced Vibration Testing of an Expanded Base Concrete Pile, Alex Sy and David Siu, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p170-186.
Free Vibration Analysis of Curved Thin-Walled Girder Bridges, Chang-Huan Kou, Steven E. Benzley, Jian-Yuan Huang and D. Allan Firmage, ST Oct. 92, p2890-2910.

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401. Frequency Domain Analysis of Undamped Systems, Eduardo, Kausel and Jose M. Roësset, EM Apr. 92,

Hypar Shell on Pasternak Foundation, D. N. Paliwal, S. N. Sinha and A. Ahmad, EM July 92, p1303-1316. Identification of Soil Properties from Foundation Impedance Functions, J. E. Luco and H. L. Wong, GT May

74. p780-793. Improved Time-History Analysis for Structural Dynamics Calculations, C.-C. Chen and A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p449-452. Interactive Base-Isolation Foundation System: II. Parametric Study, Ki Jun Ahn and Phillip L. Gould, EM Oct. 92, p2059-2071.

Oct. 92, p2039-2071.

Investigation of Parametrically-Induced Excitation in Concrete Columns, Nader Ghafoori and Kambiz Farhang, (Engineering Meckanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1051-1054.

Investigations on Influence of Vibration Parameters on Compacting of Cohesionless Soils, Jerzy Sekowski, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p969-980.

La Villita Dam Response During Five Earthquakes In-cluding Permanent Deformation, Ahmed-Waeil M. El-gamal, Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, p1443-1462.

Liping Yan, GT Oct. 90, p1443-1462.

Measuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, David W. Jensen and John M. Cory, Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1273-1285.

Modal Identification Almosithm with M.

Modal Identification Algorithm with Unmeasured Input, C. F. Cremona and J. A. Brandon, AS Oct. 92, p442-

449.
Modal Synthesis Method for General Dynamic Systems, L. E. Suarez and M. P. Singh, EM July 92, p1488-1503.
Nonlinear Free Vibration of Laminated Composite Plates, Alavandi Bhimaraddi, EM Jan. 92, p174-189.
Numerical and Experimental Studies of Vibration of Impact Damaged SMC Composite Plates, Shive K. Chaturvedi and Pay-Jye Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedwecki, ed., 1992), p1063-1066.
Pipeline Response to Pile Driving and Adjacent Excavation, P. W. Linehan, A. Longinow and C. H. Dowding, GT Feb. 92, p300-316.

Quantitative NDE Technique for Assessing Damages in Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM July 92, p1468-1487.

Recent European Developments in Constructing Grouted Slabs, Norbert Tausch, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p301-312.

Reduced Basis Technique for Nonlinear Vibrations of Composite Panels, Ahmed K. Noor, C. M. Andersen and Jeanne M. Peters, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883.

p880-883.

Risponse of Model Pile Groups to Strong Shaking, W. D. Liam Finn and W. Blair Gohl, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p27-55.

Stochastic Critical Excitations, Mukund Srinivasan, Ross Corotis and Bruce Ellingwood, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391.

Theoretical Study of Crack-Induced Eigenfrequency Changes on Beam Structures, Robert Y. Liang, Jialou Hu and Fred Choy, EM Feb. 92, p384-396.

Unconfined Granular Materials Thermalized by Fluctuating Horizontal Surfaces, Mark W. Richman and Richard E. Martin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p900-903. 903.

903. Use of Short-Period Microtremors for V<sub>s</sub> Profiling, Kohji Tokimatsu, Kenichiro Shinzawa and Shinichi Kuwaya-ma, GT Cet. 92, p1544-1558. Vibration Control of Beams by Beam-Type Dynamic Vi-bration Absorbers, Tadayoshi Aida, Susumu Toda, Norio Ogawa and Yasuo Imada, EM Feb. 92, p248-

Vibration of Beams and Trashracks in Parallel and In-clined Flows, Thang D. Nguyen and Eduard Naudasch-er, HY Aug. 91, pl056-1076. Vibration of Pedestrian Overpass, Tso-Chien Pan, CF Feb. 92, p34-45.

Feb. 92, p.34-43.
Vortex Suppression in Wet-Pit Pump Intakes, Tatsuaki Nakato, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p478-841.
Wave Propagation in Solids, A. R. Robinson, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

Vibration analysis
Computer Modeling Analysis for Highway Steel Bridge Vibration, Ton-Lo Wang, Mohsen Shahawy and Dongzhou Huang, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p679-686.
Free Vibration Analysis of Asymmetric Buildings, Sean Wilkinson and David Thambiratnam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p461-465.
Mutual Residual Energy Method for Parameter Estimation in Structures, K. D. Hjelmstad, S. L. Wood and S. J. Clark, S. T Jan. 92, p223-424.
Neural Network Based Classifiers in Vibrational Signature Analysis, M. F. Elkordy, K. C. Chang and G. C. Lee, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073.
Nonlinear Eigensolver for Exact Vibration Analysis, H. A. Smith, D. C. Sorensen and R. K. Singh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p920-923.
Vibration of a Bridge Under a Random Train of Moving Loads, M. Di Paola and G. Ricciardi, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p136-139.
Vibration control

Vibration coatrol
Densification of Loose Sands by Deep Blasting, Ulrich La
Fosse and Theodore von Rosenvinge, IV, Grouting,
Soil Improvement and Geosynthetics, Roy H. Borden,
ed., Robert O. Holtz, ed. and ilan Juran, ed., 1992),
p354-968.

ps)3-4-908.

Recent Findings in Active Structural Control, Craig A. Rogers, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p824-827.

Reliability of Controlled Structures Subject to Real Parameter Uncertainties, B. F. Spencer, Jr., C. Montemagno, M. K. Sain and P. M. Sain, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p369-372.

TMDS for Vibration Control of Systems with Uncertain Properties, Hector Jensen, Mehdi Setareh and Ralf Peck, ST Dec. 92, p3285-3296. Tuned Mass Dampers for Balcony Vibration Control, Mehdi Setareh and Robert D. Hanson, ST Mar. 92,

p723-740.

uned Mass Dampers to Control Floor Vibration from Humans, Mehdi Setareh and Robert D. Hanson, ST Mar. 92, p741-762.

Using Component Mode Synthesis and Static Shapes for Tuning TMDs, Mehdi Setareh, Robert D. Hanson and Ralf Peek, ST Mar. 92, p763-782.

Vibration Control of Beams by Beam-Type Dynamic Vibration Absorbers, Tadayoshi Aida, Susumu Toda, Norio Ogawa and Yasuo Imada, EM Feb. 92, p248-258.

238.
Vibration Control of Beams with Embedded Smart Composite Material, M. Arockiasamy, P. S. Neelakanta and G. Sreenivasan, AS Oct. 92, p492-498.
Vibration Control of Highway Bridge Under Earthquakes, Zhikun Hou and Gongkang Fu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p176-179.
Wind Effects on Base-Isolated Structures, Yu Chen and Goodarz Ahmadi, EM Aug. 92, p1708-1727.

Vibration damping
Case Studies of Structures with Man-Induced Vibrations,
H. Buchmann, ST Mar. 92, p631-647.
Vibration of Pedestrian Overpass, Tso-Chien Pan, CF
Feb. 92, p34-45.

Vibration measurement
Measured to the Max, Robert Nigbor, Ahmet Cakmak
and Robert Mark, CE Nov. 92, p44-47.

Vibration response
Modal Analysis of Vibration Response for Condition
Monitoring of Structures, George Hearn, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), p940-943.

Vibration tests

An Alternative Analysis of Vibration Tests on Two Pile Group Foundations, Alex Sy, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p136-152.

Evaluation of In Situ Effective Shear Modulus from Dispersion Measurements, Christos Vrettos and Bernd Prange, GT Oct. 90, p1581-1585.

Forced Vibration Testing of an Expanded Base Concrete Pile, Alex Sy and David Siu, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p170-186.

Observed and Predicted Response of Piles Under Dynamic Loads, Vijay K. Puri and Shamsher Prakash, ed., 1992), p153-169.

Stiffness Coefficients of Layered Soil Systems, A.

Stiffness Coefficients of Layered Soil Systems, A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624.

Vibratory compactors

Damage of Entryway Stairs due to Settlement of Gravel Backfill, Robert W. Day, CF May 92, p121-124.

The Use of Vibro Systems in Seismic Design, Roberto A. López and Robert F. Hayden, (Grostling, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1433-1445.

Videotape
1VHS Aids Traffic Flow, CE Aug. 92, p16,18-19.
Multimedia in the Civil Engineering Classroom, Glenn
Katz, (Computing in Civil Engineering and Geographic
Information Systems Symposium, Barry J. Goodno, ed.
and Jeff R. Wright, ed., 1992), p245-252.

Planning/Analysis of VPA's Norfolk North Terminal, Thomas Ward, Richard A. Woodman and Bernardo de Castilho, (Ports '92, David Torseth, ed., 1992), p134-

Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.

Viscoelasticity

Valconissusity
Applications of Viscoelastic Damper to Jointed Struc-tures for Seismic Mitigation, C. S. Tsai and H. H. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p685-688.

Effect of Ambient Temperature on Viscoelastically Damped Structure, K. C. Chang, T. T. Soong, S.-T. Oh and M. L. Lai, ST July 92, p1955-1973. Finite Element Simulation of Behavior of Laterally Loaded Piles in Permafrost, A. Foriero and B. Ladanyi, GT Feb. 90, p266-284. Numerical Integration of Transient Creep Constitutive Equations for Polycrystalline Ice, S. Shyam Sunder, Alex A. Elvin and S. Nanthikesan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992). 4520-432.

chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p429-432. Random Vibration of the Viscoelastic Structure under Se-ries of Stochastic Excitations, Pawel Sniady and Stan-islaw Zukowski, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p152-155.

p152-155.
Seismic Analysis Design of Frames with Viscoelastic Connections, Sheng-Yung Hsu and Apostolos Fafitis, ST Sept. 92, p2459-2474.
Seismic Design of Viscoelastic Dampers for Structural Applications, Ri-Hui Zhang and T. T. Soong, ST May 92, p1375-1392.

26, pl. 373-1374.
Stress Relaxation Analysis for Sealants, Chi-Ping Wang and Frank E. Weisgerber, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p240-243.

1992), p240-243.

Wave Attenuation in Viscoelastic Continuum with Fading Memory, Song-tao Xue, Jun Tobita, Tetsuya Hanzawa and Masanori Izumi, EM Aug. 92, p1597-1611.

Wave Interaction with Fluid Mud in Rectangular Trench, Francis C. K. Ting, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p75-78.

Viscoplasticity
An Elastoviscoplastic Model for High Strength Concrete, Tianxi Tang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p856-859.
Nonisothermal Viscoplasticity, Marc Benowitz and Maciej P. Bieniek, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p244-247.

Viscosity
Bonding Strength of Grouts and Behavior of Silicate
Grouted Sand, C. Vipulanandan and A. Ata, Grouting,
Soil Improvement and Geosynthetics, Roy H. Borden,
ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p700-711.
Collisional Restitution Dependence on Viscosity, Jan Lundberg and Hayley H. Shen, EM May 92, p979-989.
Effects of Mixing on Rheological Properties of Microfine Cement Grout, Lois G. Schwarz and Raymond J. Krizek, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p512-523.
Effects of Viscosity on Migration of Spills of Hazardous Liquids, Joseph Capka and Edward A. McBean, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p784-789.
An Elastoviscoplastic Model for High Strength Concrete, Tianxi Tang, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p856-859.
Engineering Properties of Acrylate Polymer Grout, Raymond J. Krizek, Dominique F. Michel, Maan Helal and Roy H. Borden, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724.
Important Sources of Errors in Computational Hydraulics, Nosrat Maghsoudi and Daryl B. Simons, (Hydraulics, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724.
Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, Kuanchung J. Lin. (Envi.

1992), p676-687.

Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, Kuanchung J. Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p216-219.

Physicochemical and Rheological Properties of Microwave Recycled Asphalt Binders, Laurand H. Lewandowski, Rogers Graham and Jim Shoenberger, (Materials: Performance and Frewniton of Deficiencies and Failures, Thomas D. White, ed., 1992), p449-461.

Pressure Losses Across Sequential Stenoses in Collapsible Tubing, Maria Siebes and Binu John, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p832-835.

Properties of Cement Grouts and Grouted Sands with Additives, C. Vipulanandan and S. Shenoy, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992). p500-511.

The Remote Monitoring of Waste Glass Melter Product, K. K. Li and A. Schneider, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p533-540.

management rrogram Committee, 1992), p535-540.
Rheological Properties of Microfine Cement Grouts with Additives, Ulf Håkansson, Lars Hässler and Håkan Stille, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p551-563.

Juran, ed., 1992), p551-563.
Time-Viscosity Relationships of Newtonian and Binghamian Grouts, A. V. Shroff and D. L. Shah, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p663-675.

Viscous flow

About Moving Contact Lines, Shih-An Yang and Allen T. Chwang, EM Apr. 92, p735-745.

Collisional Restitution Dependence on Viscosity, Jan Lundberg and Hayley H. Shen, EM May 92, p979-989.

Equivalent Statistical Quadratization of Nonlinear Hydrodynamic Loads on TLPs, Ahsan Kareem and Yousun Li, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p890-905.

General Mechanism of Turbulence, Wenxiong Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.

Oil Under Ice Buoyancy Viscous Spreading, Sujeeva A. Weerasuriya and Poojitha D. Yapa, (Hydraulic Engineering; Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p102-107.

Visual sids
Bar Codes and Data Integration in Construction, George
Stukhart, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p484-491.
Construction Applications of Vision Systems, Gary R.
Smith, H. Randolph Thomas and William Gleba,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p476-483.

Equations for Compression Index Approximation, A. W. N. Al-Khafaji and O. B. Andersland, GT Jan. 92, p148-153.

Void Ratio of Noncohesive Soils and Similar Materials, B. Aberg, GT Sept. 92, p1315-1334.

Dynamic Stiffness Analysis of Concrete Pavement Slabs, N. McCavitt, M. R. Yates and M. C. Forde, TE July/ Aug. 92, p540-556.

Aug. 92, p.340-356.

Dynamic Stresses in Granular Assemblies with Microstructural Defects, A. Shukla, C. Y. Zhu and Y. Xu, EM Jan. 92, p.190-201.

Estimation of Chemical Grout Void Filling by Electrical Resistivity, Hideo Komine, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p.372-383.

Evaluation of Concrete Bridges by Impact-Echo, Al Ghor-banpoor, Y. P. Virmani and G. R. Fatemi, (Nondestru-tive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p82-93.

Iranua Chisari, ed. and Stein Sture, ed., 1992), p82-93. Infrared Thermographic Sensing of Sewer Pipeline Prob-lems, Gary J. Weil, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p890-895.

Retention System Using Compaction Grouting in Clay Soils, Gary T. Brill and Kenneth E. Darnell, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p791-802.

Void Ratio of Noncohesive Soils and Similar Materials, B. Aberg, GT Sept. 92, p1315-1334.

623

Volatile organic chemicals

Analysis of Soil-Air Permeability and Saturated Hydraulic Conductivity for Remedial System Design, Hamid G. Bojd and B. V. Nanjundeswar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaever, ed., 1992), p321-326.

Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutants Entering the Back River Waste Water Treatment Plant, George G. Balog and Ralph O. Cullison, III., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p145-150.

Comparison of Dispersion Models for Wastewater Treatment Emissions, Jin-Sheng Lin and Lynn M. Hildemann, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11.

Degradation of Ground Water by Tetrachloroethylene, Wendy L. Cohen and Victor J. Izzo, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p65-68.

Dual-System Cleanup, Chien D. Ngo, Philip J. Mitchell, John T. Su and Gary M. Carlton, CE Aug. 92, p45-47.

Dynamic Modeling of VOC Emissions in HPO Process, Chwen-Jeng Tzeng, Roger W. Babcock, Jr., Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p67-72.

Effects of Soil Moisture and Physical-Chemical Properties of Organic Pollutants on Vapor-Phase Transport in the Vadose Zone, Say Kee Ong, Theresa B. Culver, Leonard W. Lion and Christine A. Shoemaker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p17-6-179.

Estimating VOC Emission Rates in Acration Systems, Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p17-268.

Evaluation of BAT for VOCs in Drinking Water, Robert M. Clark and Jeffrey Q. Adams, EE Mar./Apr. 91, p247-268.

From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 9309-314.

Mass Transfer of Volatile Contaminants in Showers, John

F. Pierce Linawaver, ed., 1992), p309-314.

Mass Transfer of Volatile Contaminants in Showers, John C. Little, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Migration of Chloroform in Aquifers, Sergio E. Serrano, EE Mar./Apr. 92, p167-182.

Modeling of Soil Venting Processes to Remediate Unsaturated Soils, Suresh Lingineni and Vijay K. Dhir, EE Jan./Feb. 92, p135-152.

Multi-Stage Diffused Bubble Aeration System for the Removal of Volatile Organics and Radon, a Case History, A. David Marino and Jerry Lowry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p581-586.

Oxygen Transfer and VOC Emissions from Sewer Drop Structures, Richard L. Corsi, Jennifer Shepherd, Lori Kalich, Hugh Monteith and Henryk Melcer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p305-310.

Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p98-103.

Removal of 1,2 Dibromos-Chloropopane by Counter-current Cascade Air Stripping, N. Nirmalakhandan, Won Jang and Richard E. Speece, EE Mar./Apr. 92, p226-237.

Removal of VOCs and TEL in Iron-Rich Groundwaters, James E. Rumbo, (Environmental Engineering, Control Stages Stage

p226-237.

Removal of VOCs and TEL in Iron-Rich Groundwaters,
James E. Rumbo, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p116-121.

Soil-Washing Plant to Help Dirt Come Clean, CE Aug.

92, p14.

92, p.14. Toward a Low-Emissions Wastewater Treatment Plant, Albert B. Pincince, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl-6.

VOC-Contaminated Water Cleanup Incentive Program, Dan L. Glasgow and Richard A. Rhone, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p214-219.

Volatility

Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Solvent Substitutes, Benerito S. Martinez, Jr., Ricardo B. Jacquez and Walter H. Zachritz, Il., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p169-174.

Volcan

Volcanoes
Geochemical Evidence for Waning Magmatism and Polycyclic Volcanism at Crater Flat, Nevada, Frank V. Perry and Bruce M. Crowe, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2356-2365. The Lathrop Wells Volcanic Center: Status of Field and Geochronology Studies, B. Crowe, R. Morley, S. Wells, J. Geissman, E. McDonald, L. McFadden, F. Perry, M. Murrell, J. Poths and S. Forman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013.

p1997-2013. ongevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, Bruce D. Marsh and Ronald G. Resmini, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2025-2032. Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, Michael F. Sheridan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2003-2035. Waste Management p2033-2038.

Physical Processes and Effects of Magmatism in the Yucca Mountain Region, Greg A. Valentine, Bruce M. Crowe and Frank V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2014-2024. Recurrence Models of Volcanic Events: Applications to Volcanic Risk Assessment, Bruce M. Crowe, R. Picard, C. Valentine and F. V. Perry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2344-2355. Regulatory Requirements to Address Issues Related to Volcanism and Magmatism: Code of Federal Regulations, Title 10, Part 60, Disposal of High-Level Radioactive Waste in Geologic Repositories, John S. Trapp and Philip S. Justus, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2039-2046.

Teleseismic Tomography of the Yucca Mountain Region:

Teleseismic Tomography of the Yucca Mountain Region: Volcanism and Tectonism, John R. Evans and Moses Smith, III., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2372-2380.

gram Committee, 1992, p.23/2-2390.
Temporal and Spatial Distribution of Basaltic Volcanism in the Pancake and Reveille Ranges North of Yucca Mountain, K. A. Foland and S. C. Bergman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2366-2371.

Volume change During Undrained Loading— Density Changes During Undrained Loading— Membrane Compliance, Mark D. Evans, GT Dec. 92,

On the Modelling of Damage Due to Volumic Variations in Cementitious Composites, Jacky Mazars and Jean Pierre Bournazel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p482. 485

Stress Ratio Effects on Collapse of Compacted Clayey Sand, Evert C. Lawton, Richard J. Fragaszy and James H. Hardcastle, GT May 91, p714-730. Swell versus Saturation for Compacted Clay, Robert W. Day, GT Aug. 92, p1272-1278.

Volume measure Cut and Fill Calculations by Modified Average-End-Area Method, James W. Epps and Marion W. Corey, TE Sept./Oct. 90, p683-689. Estimating Earthwork Volumes of Curved Roadways: Mathematical Model, Said M. Easa, TE Nov./Dec. 92,

Estimating Pit-Excavation Volume Using Cubic Spline Volume Formula, Chun-Sung Chen and Hung-Cheng Lin, SU May 91, p51-66.

624

Responding to Disasters, James S. Cohen, CE Jan. 92, p6.

Vortex shedding
Controlling Mechanism of Local Scouring, Bijan Dargahi,
HY Oct. 90, p1197-1214.
The Flow in the Front Stagnation Region of a Square
Plate with a Small Disturbing Wire in its Upstream, T.
C. Su and Q. X. Lian, (Engineering Mechanics, Loren
D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
p470-473.
Scour Around a Varional Pile in Western Stagnation Processing Mechanics, Loren
Description of the Policy Stagnation of the Policy S

our Around a Vertical Pile in Waves, B. Mutlu Sumer, Jørgen Fredsøe and Niels Christiansen, WW Jan./Feb. 92, p15-31.

Vortex Suppression in Wet-Pit Pump Intakes, Tatsuaki Nakato, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p478-481.

Vortices
Analysis of Spiral Vortex and Vertical Slot Vortex Drop Shafts, Michael C. Quick, HY Mar. 90, p309-325. Drownproofing of Low Overflow Structures, Hans J. Leutheusser and Warren M. Birk, HY Feb. 91, p205-213. Erosion of a Thin Lutocline Under Homogeneous Turblence, Panajiotis D. Scarlatos, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p263-268.

The Flow in the Front Starnation Region of a Square

1992), p205-208.
The Flow in the Front Stagnation Region of a Square Plate with a Small Disturbing Wire in its Upstream, T. C. Su and Q. X. Lian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p470-473.

C. Su and Q. A. Lian, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p470-473.

General Mechanism of Turbulence, Wenxiong Yang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400.

Non-Gaussian Wortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lia, ed., 1992), p292-295.

Observations on Flow Around Bridge Piers, Ferdous Ahmed and Nallamuthu Rajaratnam, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p834-839.

Seepage Effects on Bridge Pier Scour, A. C. Parola and D. J. Hagerty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p919-924.

Seepage Influence on Stability of Bridge Abutments, D. J. Hagerty and A. C. Parola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905.

Temporal Variation of Scour Around Circular Bridge Piers, Umesh C. Kothyari, Ramchandra J. Garde and Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.

Temporal Variation of Scour Around Circular Bridge Piers, Umesh C. Kothyari, Ramchandra J. Garde and Kittur G. Ranga Raju, HY Aug. 92, p1091-1106.

The Transverse Vortex in the Wall Regions of the Turbulent Boundary Layers in the Flows with Adverse Pressure Gradient, Q. X. Lian and T. C. Su, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p474-477.

Vibration of Beams and Trashracks in Parallel and Inclined Flows, Thang D. Nguyen and Eduard Naudascher, HY Aug. 91, p1056-1076.

Wave Induced Vortex Near Seashore, Tai-Wen Hsu, Shan-Hwei Ou and Chun-Wei Sun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p466-469.

ed., 1992), p466-469.

Prevailing Wage Can't Be Required, CE June 92, p32. Wage Requirement Stifles Competition, CE Jan. 92, p27.

Walkways And it Tastes Great, Too, CE Aug. 92, p8.

Analysis of Buildings Using Strain-Based Element with Rotational DOFs, A. K. H. Kwan, ST May 92, p1191-

1212.
Backfill-Stiffened Foundation Wall Construction, Robert Nicholls, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p286-295.
Backfill-Stiffened Foundation Wall Design, Robert Nicholls, GT Nov. 92, p1822-1836.

Construction Induced Movements of Insitu Walls, G. Wayne Clough and Thomas D. O'Rourke, (Design and Performance of Earth Retaining Structures, Philip Lambe, ed. and Lawrence A. Hansen, ed., 1990), p439-470.

470.

Development of Design Spectra for Actively Controlled Wall-Frame Buildings, Y. P. Wang, A. M. Reinhorn and T. T. Soong, EM June 92, p1201-1220.

Ductility and Detailing Requirements of Bearing Wall Buildings, John W. Wallace and Jack P. Moehle, ST June 92, p1625-1644.

Masonry Wall and Window System Leakage Investigation for University Building, John Frauenhoffer, CF May 92, p107-115.

Nonlinear Engine-Element Model for Light-Frame Stud.

Nonlinear Finite-Element Model for Light-Frame Stud Walls, B. Kasal and R. J. Leichti, ST Nov. 92, p3122-

5133. Out-of-Plane Seismic Response of Reinforced Masonry Walls, Martin R. Button and Ronald L. Mayes, ST Sept. 92, p2499-2513.
Performance of Masonry Walls: Case Study in Kuwait, Adnan M. Al-Adeeb and Hayfaa A. Al-Mudhaf, MT Feb. 92, p77-90.

Feb. 92, p77-90.

Strain Compatibility Design Method for Reinforced Earth Walls with Metallic Reinforcements, Ilan Juran and Chao L. Chen, GT Apr. 89, p435-456.

Wall System Makes the Cut, CE Dec. 92, p88.

Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.

Wandmacher, Cornelius Death Claims Two ASCE Honorary Members, CE Nov. 92, p76.

Warehouse Tilts Toward Speedy Completion, CE Mar. 92, p16-17.

Warpage Free Vibration Analysis of Curved Thin-Walled Girder Bridges, Chang-Huan Kou, Steven E. Benzley, Jian-Yuan Huang and D. Allan Firmage, ST Oct. 92, p2890-2910.

pt.990-2910. Stiffness Matrix for Nonlinear Analysis of Thin-Walled Frames, Aura Conci, EM Sept. 92, pl 859-1875. Thin-Walled Multicell Box-Girder Finite Element, A. Ghani Razaqpur and Hangang Li, ST Oct. 91, p2953-2971.

Warranties

Computer Design Failure: Who Pays? Tracy Lenocker, CC Oct. 92, pl-3,6-7. Court Broadens Implied Warranty Definition, CE Oct.

92, p28. Impli ed Warranty Not Found in Bid Data, CE Nov. 92, p30.

Washiagion
Decision Management for the Hanford Environmental
Dose Reconstruction Project, William J. Roberds, H.
A. (Walt) Haerer and Dettof von Winterfeldt, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p1743-1750.
Hanford Defense Waste Separation Options, B. A. Wolfe,
W. B. Barton and D. G. Sutherland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992),
p1701-1710.
Overview of the Hanford Environmental Deve

p1701-1710.

Overview of the Hanford Environmental Dose Reconstruction Project, D. B. Shipler, B. A. Napier and T. A. Ikenberry, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204.

Rainfall-Runoff Relations for the Puget Sound Area, R. S. Dinicola, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p890-894.

Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chilcote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p1-14.

Paul Chilcote and Paul Sorensen, Ports '92, David Torseth, ed., 1992), pl-14.
Use of Interactive Simulation Environments for Evalua-tion of Water Supply Reliability, Larry M. Karpack and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p144-149. X Marks the Spot at Hanford, CE July 92, p11.

Waste disposal

Analysis of Dredged Material Deposition Patterns, Eric

E. Nelson and Billy H. Johnson, (Ports '92, David Torseth, ed., 1992), p470-479,

Assessing Cull!) Speciation and Transport in the New
York Bight, A. B. M. Badruzzaman and Wu-Seng Lung,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p476-488.
Contaminant-Grout Interaction, Stephan A. Jefferis,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p1393-1402.
Development of a Protocol to Evaluate Volatility and

1992, p1395-1402.
Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Solvent Substitutes, Benerito S. Martinez, Jr., Ricardo B. Jacquez and Walter H. Zachritz, Il., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p169-174.

Dredged Material Placement Techniques—A Review of Its Past, Present and Future, John B. Herbich and R. Krishnamohan, (Ports '92, David Torseth, ed., 1992), p548-562.

p345-502. Ran and J. J. K. Daemen, (Grouting Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p360-371. Ground Improvement of Rubbish Dump Over Reclaimed Tin Mine, Aziz Mustafa and Mohd Raihan Taha, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1324-1331. Guidance for Decontamination of Debris Mackensia I.

1992), p1324-1331.
Guidance for Decontamination of Debris, Mackenzie L.
Davis, Gene P. Chou, William G. Sproat, Jr. and Peter
J. Shields, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p49-54.
Hydrodynamic and Water Quality Modeling of Lower
Green Bay, David J. Mark and Barry W. Bunch, (Estuarine and Coastal Modeling, Malcolm L. Spaulding,
ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph
Cheng, ed. and Craig Swanson, ed., 1992), p657-668.
Laboratory Investigation of Beach Profiles in Tailings
Disposal, Xiaosheng Fan and Jacob Masliyah, HY
Nov. 90, p1357-1375.
Mechanical Response of Cellular Materials Used in

Mechanical Response of Cellular Materials Used in Waste Shipping Containers, A. K. Maji, S. Donald and H. L. Schreyer, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p308-

311.

Modeling Dredged Material Disposed in Open Water, B.
H. Johnson, D. N. McComas and D. C. McVan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1036-1041.

Moisture and Suction in Sanitary Landfills in Semiarid Areas, G. E. Blight, J. M. Ball and J. J. Blight, EE Nov/Dec. 92, p865-877.

Multiuser Sites for Contaminated Sediment Disposal, Pieter N. Booth and Kimberly A. Henson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p96-101.

A Numerical Simulation Approach to Estimating Dispos-

Karamouz, ed., 1992), p96-101.

A Numerical Simulation Approach to Estimating Disposal Site Stability, Norman W. Scheffner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nami G. Bhowmik, ed., 1992), p1006-1011.

Properties of Tire Chips for Lightweight Fill, Dana N. Humphrey and William P. Manion, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1344-1355.

1355.

QSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, N. H. Tang, D. J. W. Blum, R. E. Speece and N. Nirmalakhandan, EE Jan.Feb. 22, p17-37.

Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p41-416.

Seismic Stability Analysis of Landfill, Max Y. Ma, Albert T. Yeung and An-Bin Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724.

Session Report—Natural and Man-Made Hazards and Risk of Extreme Events, Jim Lambert, (Risk-Based De-cision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p358-359.

626

SOA: Large Strain Consolidation Predictions, F. Townsend and M. C. McVay, GT Feb. 90, p222-243.

Solid Waste Management: The Extension Service Initiative, M. F. Dahab and W. E. Woldt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-

Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.

Three-Dimensional Thermal Jump in Stratified Cooling Channel, L. -L. Guo and R. E. Baddour, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p381-384.

The ACR Issue Resolution Process, David K. Zabransky, Michael S. Alissi and Michael H. Schwartz, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p173-177

Alternative Cask Maintenance Facility Concepts, an Update and Reassessment, C. R. Attaway, L. G. Medley, R. B. Pope, L. B. Shappert and A. C. Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1336-1342.

1992), p130-1342.
An Analysis of Contingencies for Making Casks Available for Use During the Early Years of Federal Waste Management System Operations, P. E. Johnson, D. S. Joy, R. B. Pope, L. B. Shappert, M. W. Wankerl, R. E. Best, F. L. Danese and S. Schmid, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1310-1316.

management Program Committee, 1992, p.1510-1510.
Application of Decision Support Systems (DSS) to the Management of Radioactive Wastes, René F. Reitsma and Jacquelyn F. Sullivan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p469-474.

Application of Performance Assessment as a Tool for Guiding Project Work, C. McCombie and P. Zuidema, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2126-2135.

An Assessment of the Transportation Costs of Shipping Non-Fuel Assembly Hardware to FWMS Facilities, L. B. Shappert, P. E. Johnson, D. S. Joy, R. E. Best and F. L. Danese, (High Level Radioactive Waste Management, High Level Radioactive Waste Management) From the Level Radioactive Waste Management Program Committee, 1992), p190-195.

Beginning of Motion for Selected Unanchored Residue Materials, John E. Gilley and Eugene R. Kottwitz, IR July/Aug. 92, p619-630.

Benefits of International Technical Collaboration, Thomas H. Isaacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32.

Canada's Green Plan: Unique Approach to Preserving Environment, Thomas J. Selinger, El Oct. 92, p349-

Canadian High-Level Radioactive Waste Management System Issues, C. J. Allan, B. R. Gray and P. D. Stevens-Guille, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p11-17.

A Comparison of a New Generation of Spent Fuel Cask Designs with Current Cask Design Characteristics, William H. Lake, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1839-1843.

Computer-Aided Characterization of Wellfield-Testing Results in Basalts, J. A. Paschis, J. R. Kunkel and T. D. Steele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p475-480.

Considerations in Managing the Assessment of the Cana-dian Nuclear Fuel Waste Disposal Concept, K. W. Dor-muth, P. A. Gillespie and S. H. Whitaker, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

Current Perspectives on Performance Assessment at the NRC, S. M. Coplan, N. A. Eisenberg, M. V. Federline and John D. Randall, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2145-2150.

ment Program Committee, 1992), p2145-2150.
Demands Placed on Waste Package Performance Testing and Modeling by Some General Results of Reliability Analysis, Dwayne A. Chesnut, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p994-1002.
The Design of Landfill Slopes, Ibraheem Alshunari, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1232-1243.
Psycloping Concentral Models for Professional Programs of Progr

Developing Conceptual Models for Performance Assessment of Waste Management Sites, Felicia A. Kerl, A. Sharif Heger and David P. Gallegos, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p502-509.

Development of Functional Requirements for a Moni-tored Retrievable Storage Installation, M. A. Duffy, T. A. Mozhi, P. N. Kumar and W. A. Lemeshewsky, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1867-1874.

gram Committee, 1992), p243-249.

The DOE Office of Environmental Restoration and Waste Management Comprehensive Integrated Planning Process, Richard J. Aiken, Cyril W. Draffin, Jr. and Karl T. Pflock. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1555-1558.

Economic Analysis of Including an MRS Facility in the Waste Management System: A Revisit, J. W. Williams, C. Conner, A. J. Leiter and E. Ching, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1903-1908. Waste Man p1903-1908.

Education: Gateway to the Solution, Ginger P. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10.

Educational Program for Hazardous-Waste Management, Carol J. Miller, Ralph H. Kummler, James H. McMick-ing and Robert W. Powitz, El Apr. 90, p221-228.

Enhancing the Partnership—Improving Public Aware-ness Through Education and Information, Carol I. Hanlon, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1794-1798.

Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, 0-87262-878-7, 685pp.

Evolution of the French Policy Related to the Studies on Long-Lived Radioactive Waste Management, H. E. Wallard, (High Level Radioactive Waste Management Program High Level Radioactive Waste Management Program Committee, 1992), p49-51.

Experience With an Educational Package on Radioactive Waste Management in a Country Having no Nuclear Power Programme, P. Krejsa and G. Ehrenstrasser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1491-1493.

Facility Interface Capability Assessment, Thomas E. Pol-log, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), p178-182.

The Flow to Licensing Technical Data Tracking and the Licensing Support System (LSS), Jan Statler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2088-2092.

French High-Level Waste Management Research and Development Program, J. P. Moncouyoux and C. G. Sombret, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409.

The High Level Radioactive Waste Management Program in Japan, Aiji Yamato, Sumio Masuda and Hideki Sakuma, (High Level Radioactive Waste Management Program Committee, 1992), p41-48.

High-Level Waste Package Retrievability, Thomas W. Doering and David Stahl, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p362-365.

Human Error in Complex Systems, Douglas H. Harris, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p157-1533.

Human Factors and System Safety in the Management of High-Level Radioactive Waste Management Program Committee, 1992), p157-1534.

Human Factors Programs for High-Level Radioactive Waste Management Program Committee, 1992), p154-1546.

Human Factors Programs for High-Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), p1547-1554.

Hentifying Promising Hazardous Waste Reduction Tech-

p1547-1554.

pl 547-1554. Identifying Promising Hazardous Waste Reduction Technologies, James D. Englehardt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl 39-144. Implementation of the Department of Energy's New American Indian Policy within the Civilian Radioactive Waste Management Program, J. Bennett Easterling and Beth Berlin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 61-165. Information Convservation and Retrieval—A Nordic Nuclear Safety Research Project, Mikael Jensen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), p. 2202-2206. Information Management for the Department of Energy

dioactive Waste Management Program Committee, 1992), p2202-2206.
Information Management for the Department of Energy Office of Civilian Radioactive Waste Management, Barbara A. Cerny, (High Level Radioactive Waste Management, Program Committee, 1992), p2078-2082.
In-House Training, Formal Education and Public Outreach, Yolanda A. Willis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), p2190-2201.
An Inside Look at the 40 CFR 191 Containment Requirements, Floyd L. Galpin, Raymond L. Clark and Caroline Petti, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1047-1054.
An Integrated Approach to Strategic Planning in the Civilian High-Level Radioactive Waste Management Program, William M. Sprecher, Jonathan Katz and Richard J. Redmond, (High Level Radioactive Waste Management Program Committee, 1992), p1559-1564.
An Interdisciplinary Approach to Learning and Teaching About Nuclear Waste Management, High Level Radioactive Waste Management Hogram Committee, 1992), p1807-1812.

An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Central Research Program Committee, 1992), p1807-1812.

An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Central Research Program Committee, 1992), p1807-1812.

An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Central Research Program Committee, 1992, p1807-1812.

mittee, 1992), p1807-1812.

An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Century: Beyond Engleberg, Richard R. Powell, Edwyn James and Alfred Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1494-1498. Issues Influencing Colocation and Integration of Cask Maintenance and MRS Facilities, John A. Richardson, David E. Borchardt and Christopher Charles, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1883-1888. Leave the Short Form at Home, CE Apr. 92, p10.

1992, p1883-1888.
Leave the Short Form at Home, CE Apr. 92, p10.
Lessons Learned from the Performance Assessment of SKI Project-90, J. Andersson, K. Andersson, S. Norrby and S. Wingefors, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2109-2113.

Licensing Code-of-Practice, Leonard T. Skoblar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), plo55-1061.

Licensing Issues: Clarification and Convergence, John P. Roberts, Linda J. Desell, Mary L. Birch, Lester Berkowitz and Joseph F. Bader, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236.

Methodology Developed by the French National Nuclear Waste Management Agency (ANDRA) for the Performance Assessment of a Deep Geological Repository, P. Raimbault, C. Izabel and J. M. Peres, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p510-516

pt 10-516.

MRS Project Management, J. W. Doman and J. Vlahakis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p1896-1902.

mittee, 1992), pl.896-1902.
The Need for a True System Approach for High-Level Waste Management Systems Engineering Recommendations from the U.S. Nuclear Waste Technical Review Board, Dennis L. Price, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p822-826.
On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, David Lewis Feldman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.143-151.

p143-151.

p. 143-151.

Ontario Hydro's Plan for Used Nuclear Fuel, P. D. Stevens-Guille, H. A. Howes and J. Freire-Canosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p93-98.

Overview of the Radioactive Waste Management Program Committee, 1992), p93-98.

Overview of the Radioactive Waste Management Program Committee, 1992, management Program Committee, 1992), p52-56.

A PC-Based Discrete Event Simulation Model of the Ci-

PC-Based Discrete Event Simulation Model of the Civilian Radioactive Waste Management System, G. L. Airth, J. W. Nehls and D. S. Joy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1317-1323.

Planning Water Supply and Sanitation Projects in Developing Countries, Suley A. Muyibi, WR July/Aug. 92, p351-355.

p351-355.

The Potential Application of Military Fleet Scheduling Tools to the Federal Waste Management System Transportation System, I. G. Harrison, R. B. Pope, R. D. Kraemer and M. R. Hilliard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1224-1329.

Preclosure Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, K. Johansen, L. Grondin and S. Naqvi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p481-488.

Program Analysis and Compliance Management, Thomas W. Woods and Dillard B. Shipler, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1724-1729.

Waste Mar p1724-1729. Project Tests Safer Burning of Medical Waste, CE Jan. 92, p19,21.

92, p19,21.

Projected Compositions and Radiogenic Properties of DWPF Glasses, J. R. Fowler and M. J. Piodinec, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p904-910.

The Proposed Waste Management Plan for Dairy Farm Wastes Polluting the Tangipahoa River and Lake Pontchartrain, Gianna M. Jones, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p656-661.

Rail Industry Trends Related to Waste Transportation, Ruth Maddigan, Marlene Owens and Paul Shelton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1330-1335.

Realizing Opportunity Horizons: DOE's Records Information Systems Design Efforts, Daniel J. Graser, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2098-2105.

dioactive Waste Management Program Committee, 1992), p2098-2105.

A Regulatory Perspective on Design and Performance Requirements for Engineered Systems in High-Level Waste Robert M. Bernero, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p813-821.

Return to Italy of Vitrified High Level Radioactive Waste Management Program Committee, 1992, p813-821.

Return to Italy of Vitrified High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p256-262.

Robotics for Radioactive Waste Management in AEA Technology Facilities, S. A. Legg, A. Staples and C. J. H. Watson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p980-984.

The Role of the M&O in the High-Level Civilian Radioactive Waste Management System, Roland L. (Robby) Robertson, (High Level Radioactive Waste Management Program Committee, 1992), p2415-2246.

A Rule-Based System for Evaluating Final Covers for Hazardous Waste Landfills, Lewis A. Rossman and James T. Decker, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p161-175.

RW-859—A Key Link Between Government and Utilities, Mary Lee Payton and Kathleen Gibbard, (High Level Redioactive Waste Management) High Level Redioactive Waste Management High Level Redioactive

p161-175.
RW-859—A Key Link Between Government and Utilities, Mary Lee Payton and Kathleen Gibbard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1281-1286.
Sharing Waste Management Data Over a Wide Area Computer Network, William Menke and Paul Friberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p827-832.
Solid Waste Management: The Extension Service Initia.

Solid Waste Management: The Extension Service Initiative, M. F. Dahab and W. E. Woldt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-548.

Spanish High Level Radioactive Waste Management Sys-tem Issues, J. M. Espejo and A. R. Beceiro, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

p18-24.

p18-24.

STACE: An Integrated Code for Evaluating Spent-Fuel Transport Cask Containment, Kevin D. Seager, Philip C. Reardon and Peter R. Barrett, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1765-1769.

waste Management Program Committee, 1992), p1765-1769.

Swedith High-Level Radioactive Waste Management Issues, Per-Eric Ahlström, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p33-40.

Swiss High-Level Radioactive Waste Management System Issues, C. McCombie, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), p25-27.

System Integration for the Disposal of Defense Transuranic Waste, Mark W. Frei, Joseph A. Coleman and Sandra Fucigna, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, Three Case Histories of Waste Stabilization, Edward L. Kosinski, David S. Martin and Alan R. Ringen, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1261-1272.

Three-Dimensional Finite Element Modelling of Near-

hree-Dimensional Finite Element Modelling of Near-Field Contaminant Transport in a Nuclear Fuel Waste Disposal Vault, Tin Chan and Frank Stanchell, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p297-303.

1992, p.297-303.
Throughput Study for the Civilian Radioactive Waste Management System, Peter Gottlieb, William Bailey, Ill., Flora Emami, Lawrence M. Ford and John F. King, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1349-1358.

Towards Earning Public Trust and Confidence Through Accountability, Allen Benson, William Morgan and Deirdre Williamson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1917-1920. Understanding Nuclear Waste Management Within a Global Framework, R. R. Powell, M. Robinson and W. Pankratius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1465-1469. Understanding the High-Level Radioactive Waste Management, Though the Cooperative Agreement Process, L. Cheryl Runyon, Millard Peck, III. and Glenn H. Gardner, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p152-155. mittee, 1992), p152-155.

mittee, 1992), p152-155.
Universal Storage/Transport/Disposal Packages, Marvin
L. Smith, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p228-232.
Use of Annotated Outlines to Prepare Guidance for License Applications for the MRS and MGDS, John
Roberts and William R. Griffin, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p1040-1046. p1040-1046.

p1040-1040. Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang. ed. and Kenneth L. Bergeson, ed., 1992, 0-87262-907-4, 358pp.
Value-Added QA Within the High-Level Radioactive Waste Program, Tom Colandrea, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 1202-1208. Waste Man p1303-1309.

Waste Caretakers: Who Will They Be? A. Wohlpart, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-

mittee, 1992), p1485-1490.

Waste processing facilities

Regenerative Life Support Technology Challenges for the Space Exploration Initiative, Vincent J. Bilardo, Jr. and Ronald L. A. Theis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p. 1748-1764.

VOCs: The New Effluent, Teresa Austin, CE Mar. 92,

Waste recycling
Asbestos Melting, Reuse Could Ease Landfill Demand,
CE Jan. 92, p18.
Could Business in France, Virginia

CE Jan. 92, p18.

The Environment is Good Business in France, Virginia Fairweather, CE Mar. 92, p66-68.

Environmental Monitoring Plan for a Pilot Study Using Phosphogypsum as a Roadbed Material, Reid Lea, Adam Faschan and Marty Tittlebaum, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p128-139.

Guidance for Deconstraination of Pebric Mackenia I.

1992), p128-139.
Guidance for Decontamination of Debris, Mackenzie L. Davis, Gene P. Chou, William G. Sproat, Jr. and Peter J. Shields, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p49-54.
The High Level Radioactive Waste Management Program in Japan, Aiji Yamato, Sumio Masuda and Hideki Sakuma, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p41-48.
Highway Construction Use of Wastes and By-Products.

Highway Construction Use of Wastes and By-Products, Robert J. Collins and Stanley K. Ciesielski, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p140-152.

1992), p140-152.
An Integrated Human/Plant Metabolic Mass Balance Model, A. B. Thompson, J. R. Schulz and C. G. Cooley, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1771-1788.
Regenerative Life Support Technology Challenges for the Space Exploration Initiative, Vincent J. Bilardo, Jr. and Ronald L. A. Theis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1748-1764.
Start-Ups, CE Feb. 92, p12.

Start-Ups, CE Feb. 92, p12. Start-Ups, CE Mar. 92, p8. Start-Ups, CE July 92, p11.

Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, D. W. Ming, D. C. Golden and D. L. Henninger, [Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1709-1719.

p1709-1719.

Waste sife Cleanup
Bugs Vacuum Dirty Soil, CE Nov. 92, p87.

Cleaning Up Chromium, W. Scott McKinley, Randy C.
Pratt and Loren C. McPhillips, CE Mar. 92, p69-71.

Cleanup of a HLW Nuclear Fuel Reprocessing Center
Using 3-D Database Modeling Technology, Robert C.
Sauer, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p859-868.

Clean-Up of Contaminated Soils: A Necessary First Step
in Industrial Land Redevelopment, Dennis D. Lang,
(Ports '92, David Torseth, ed., 1992), p301-315.

Coal-Gas Conundrum, Deborah English, Carol Whitlock
and Dean Hargens, CE Mar. 92, p49-51.

Court Ruling May Broaden Liability Nationwide, CE
Nov. 92, p27-28.

Electroosomotic Removal of Gasoline Hydrocarbons and

Nov. 92, p27-28.

Electroosomotic Removal of Gasoline Hydrocarbons and TCE From Clay, Clifford J. Bruell, Burton A. Segall and Matthew T. Walsh, EE Jan./Feb. 92, p68-83.

Evaluation of Dewatering and Treatment System at the Chisman Creek Superfund Site, Precha Yodnane, Denis W. Okorn and Burton M. Marshall, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p250-255.

Design to Permetistion, The Veron Site.

engineering: Saving a Inreatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p250-255.
From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314.
Multiuser Sites for Contaminated Sediment Disposal, Pieter N. Booth and Kimberly A. Henson, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p36-101.
Process Design for Bioremediation of Nitrogen-Species Contamination of Soils and Groundwater, Paul D. Turpin, J. Michael Henson and Steven L. Martin, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179.
Properties of Solidified/Stabilized Chromium Contaminated Soil, Beth C. Fleming and M. John Cullinane, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1204-1209.
Reassessing the Risk Assessment, Wayne K. Tusa, CE Mar. 92, p46-48.
Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p98-103.
Remediation Site Prioritization by the Risk Ranking and Filtering Method, James H. Lambert, Con Way Ling and Yacov Y. Haimes, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p311-321.
Roadmaps: An Effective Issue-Based Planning Process, Cyril W. Draffin, Jr. and A. Nick Suttora. (High Level

Roadmaps: An Effective Issue-Based Planning Process, Cyril W. Draffin, Jr. and A. Nick Suttora, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1567-1571.

p1567-1571.
sediment Sampling Techdniques in Complex Environments, John J. Nocera, Gregory P. Matthews and
Thomas M. Simmons, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p92-97.
Start-Ups, CE Mar. 92, p8.
Start-Ups, CE Sept. 92, p11.
Value Engineering at a Superfund Site, Virendra Singh
and Amy Monti, CE Mar. 92, p60-63.

Waste sites

Coal-Gas Conundrum, Deborah English, Carol Whitlock and Dean Hargens, CE Mar. 92, p49-51. Economic Impact of Nuclear Facilities, Eric Knox and Scott Burnison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p949-953.

Grouting Against Hazwaste, Ken Weaver, R. M. Coad and K. R. McIntosh, CE May 92, p70-72.

and R. R. Methiosn, C.E. May 92, p. 10-12.

MRS Site Requirements and Considerations and the Potential Influences of Specific Technology Selections, David F. Fenster, John A. Richardson and K. Michael Cline, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 204-211.

Ressection the Pitch Assessment Wayne K. Tura, C.E. Ressections the Pitch Assessment Wayne K. Tura, C.E.

Reassessing the Risk Assessment, Wayne K. Tusa, CE Mar. 92, p46-48.

Mar. 74, pao-85.
Regulatory Considerations in Design of the Exploratory Studies Facility, Michael W. Parsons and Michael D. Voegele, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p671-678.

Committee, 1992), p671-678.
Remediation Site Prioritization by the Risk Ranking and Filtering Method, James H. Lambert, Con Way Ling and Yacov Y. Haimes, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p311-221-221.

Assessment of Shipping Radioactive Waste Using the Standard Waste Box, O. S. Wang, R. F. Caristrom, G. A. Coles and M. V. Shultz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p416-420.

A Screening Method to Rank Landfills Based on Relative Environmental Hazard, W. Woldt, M. Hagemeister, D. Jones and M. Dahab, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416.

Seismic Anlaysis and Design of Lined Waste Fills: Current Practice, Raymond B. Seed and Rudolph Bonaparte, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1521-1545.

Stability and Closure Design for a Landfill on Soft Clay and Peat, Richard A. Mitchell, Sybil E. Hatch and Ronald A. Siegel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p685-704.

Waste sludge production
Toxic Metals Reduction Process for Waste Sludge, Joseph
G. Rabosky and Kashi Banerjee, (Environmental Enrieneering, Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p388-393.

Waste stabilization ponds
Pilot Waste-Stabilization Pond in Tanzania, Michael
Yhdego, EE Mar./Apr. 92, p286-296.

Waste storage

Waste storage
Achievements Within the International INTRAVAL Project, Johan Andersson and Kristina Skagius, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1414-1420.

1992), p1414-1420.
Application of NUHOMS\* to an Integrated MRS/ Transportation System, J. M. Rosa, R. A. Lehnert and R. D. Quinn, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p196-200.
ASME Pressure Vessel Code Application to Nuclear Waste Container Design, Mohamed B. Trabia and Mark Kiley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1244-1252.
A Bavesian Reliability Approach to the Performance As-

gram Committee, 1992), p1244-1252.

Bayesian Reliability Approach to the Performance Assessment of a Geological Waste Repository, John A. Flueck and Ashok K. Singh, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1625-1632.

Behaviour of Used CANDU Fuel Stored in 150°C Moisture-Saturated Air, K. M. Wasywich and C. R. Frost, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1166-1173.

Benefits of International Technical Collaboration. Thom-

mittee, 1992), p1166-1173. Benefits of International Technical Collaboration, Thomas H. Isaacs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32.
Canadian High-Level Radioactive Waste Management System Issues, C. J. Allan, B. R. Gray and P. D. Stevens-Guille, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p11-17.

A Comparison of Radionuclide Inventories Between the Direct-Disposal and the Acinide-Burning Cycles, JorShan Choi, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1381-1386.

gam Communet, 1992, ph38-1-380.
Conceptual Design of a Monitored Retrievable Storage
Cask Employing Yucca Mountain Containers, C.
Erwin, D. R. Jackson, J. R. Oliver, M. S. Aljohani and
D. B. Bullen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2235-2240.

A Context for Understanding the Significance of Radiation Exposures from the MRS, Dan Kane, Ricardo Palabrica and Christine Van Lenten, (High Level Radiooctive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1938-1945.

Critical Stresses in Pintle, Weldment and Top Head of Nuclear Waste Container, Samann G. Ladkany and Brett R. Kniss, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p. 1253-1260.

Criticality Safety of TRU Storage Arrays at the Waste Isolation Pilot Plant, William A. Boyd and Mark W. Fecteau, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2069-2077.

Design and Licensing of the VSC Dry Fuel Storage System, Art J. McSherry, John V. Massey and Boris A. Chechelnitsky, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1216-1220.

Program Commetee, 1932, p.1216-1226.

Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, C. S. Wittwer, G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271.

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230.

Development of a Demonstration Program for a Dry Cask-to-Cask Transfer System with Dual Purpose Casks, Rita W. Bowser and Robert E. Jones, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2212-2218.

Development of Functional Requirements for a Monitored Retrievable Storage Installation, M. A. Duffy, T. A. Mozhi, P. N. Kumar and W. A. Lemeshewsky, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1867-1874.

1972, p1601-1978.
Disposal of Failed Melters from Defense Waste Vitrification Facilities, P. J. Brackenbury, J. King and E. C. Norman, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2381-2386.

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels, J. S. Grant, P. M. Boocock and C. J. Ealing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2227-2234.

Early Evaluation of the Suitability of the Yucca Mountain Site, Jean L. Younker, Larry D. Rickertsen and Bruce R. Judd, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p517-524.

Economic Analysis of Including an MRS Facility in the Waste Management System: A Revisit, J. W. Williams, C. Conner, A. J. Leiter and E. Ching, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1903-1908.

Effectiveness of Injected Cement Grout under Harsh Environmental Conditions, G. Ballivy, J. C. Colin and T. Mnif, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p588-600.

Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, M. Pechs and K. Einfeld, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1181-1187.

Experience with Spent Fuel Storage Licensing, Frederick C. Sturz, Ralph H. Sievers and John R. Stokley, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.220-227.

A Forecasting Model of Gaming Revenues in Clark County, Nevada, B. Edwards, A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p943-948.

The German Cask-Concept for Intermediate and Final Storage of Spent Fuel, K. Janberg, H. Spilker and R. Hüggenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p385-394.

Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, Carl B. Ellis and Cindy L. Rogers, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2207-2211.

Interfacing the Existing Cask Fleet with the MRS or Fitting Round Pega Into Square Holes, J. W. Doman and R. E. Hahn, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992.), p1889-1897.

International Status of Dry Storage of Spent Fuels, K. J. Schneider, S. J. Mitchell and A. B. Johnson, Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1159-1165.

Lessons Learned from Utility NRC Licensing Experience, Jay E. Silberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p679-684.

gram Committee, 1992), po 19-004.
Management of Scientific and Engineering Data Collected During Site Characterization of a Potential High-Level Waste Repository, Claudia M. Newbury and Gail W. Heitland, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2093-2097.

Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, Kenneth P. Baskin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p691-694.

militee, 1992, 1907-1994.
Materials Testing Aspects of the Problem of the Chernobyl NPP 4th Unit's High-Level Radioactive Products Burial, E. B. Anderson, B. E. Burakov and E. M. Pasukhin, High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p.2395-2398.

MRS Project Management, J. W. Doman and J. Vlahakis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1896-1902.

MRS Site Requirements and Considerations and the Potential Influences of Specific Technology Selections, David F. Fenster, John A. Richardson and K. Michael Cline, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p204-211.

Committee, 1992), p204-211.

MRS Using a FUELSTORMT Vault, M. K. Valentine and H. Günther, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1875-1882.

Program Committee, 1992), p1017-1002.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, Dinesh C. Gupta, Jacob Philip, Loren J. Lorg and Asadul H. Chowdhury, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p212-219.

Occurrence of Metallic Phases in Spent Nuclear Fuel: Significance for Source Term Predictions for High-Level Waste Disposal, English C. Pearcy and Hersh K. Manaktala, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p131-136. On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, David Lewis Feldman, (High Level Radi-oactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p143-151.

p143-151.
Ontario Hydro's Plan for Used Nuclear Fuel, P. D. Stevens-Guille, H. A. Howes and J. Freire-Canosa, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p250-255.
Overview of ORIGEN2 and ORIGEN-S: Capabilities and Limitations, C. V. Parks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p57-64.
An Overview of Partitioning-Transmutation, Allen G. Croff and Gordon E. Michaels, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1359-1367.
Performance-Assessment Comparisons for a Repository

Management Frogram Committee, 1922, p. 1339-1361.

Formance-Assessment Comparisons for a Repository Containing LWR Spent Fuel or Partitioned/
Transmuted Nuclear Waste, R. W. Barnard and W. W.-L. Lee, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 1397-1403. Performance-Asses

gram Committee, 1992), pi 397-1403. Physical Mechanisms Contributing to the Episodic Gas Release from Hanford Tank 241-SY-101, Rudolph T. Allemann, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p610-614. A Pilot Scale Demonstration of the DWPF Process Control and Product Verification Strategy, Nick D. Hutson, Carol M. Jantzen and D. Chris Beam, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p525-532. p525-532.

Badiation Measurements for Verifying the Loading of Burnup Credit Casks, Ronald I. Ewing, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p2161-2164.

p. 2101-2104.

Records Management in Support of the Licensing Process for the High Level Radioactive Waste Facility, Dennis G. Sheats, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 2083-2087.

gram Committee, 1992), p2083-2087.

A Regulatory Perspective on Design and Performance Requirements for Engineered Systems in High-Level Waste, Robert M. Bernero, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p813-821.

Risk Assessment of Shipping Radioactive Waste Using the Standard Waste Box, O. S. Wang, R. F. Carlstrom, G. A. Coles and M. V. Shultz, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p416-420.

The Role of ORIGEN-S in the Design of Burmup Credit Spent Fuel Casks, M. C. Brady, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p65-71.

71.

The Role of Performance Assessment in Validation, Regulation and Public Acceptance, Thomas H. Pigford, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p99-101.

The Role of the M&O in the High-Level Civilian Radioactive Waste Management System, Roland L. (Robby) Robertson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p2415-2416.

Semi-Analytical Treatment of Fracture/Marix Flow in a Dual-Porosity Simulator for Unsaturated Fractured Rock Masses, R. W. Zimmerman and G. S. Bodvarsson, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p272-278.

Shielding and Criticality at the MRS Facility, Kenneth L.

mittee, 1992, p.212-218.
Shielding and Criticality at the MRS Facility, Kenneth L.
Ashe, Robert G. Eble and James R. Hilley, Jr., (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), p2056-2061.

17721, p2030-2001.
Shielding Design of the Ventilated Storage Cask, John H. Kessler, John V. Massey and Henry H. Tran, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2047-2055.

Shipping Cask Development Loaded 4 PWR Fuel Assemblies, H. Y. Kang, J. C. Lee and S. G. Ro, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1844-1847.

ome Aspects Concerning the Design of High Level Waste Vitrification and Storage Facilities, V. A. Kurnosov, M. V. Strakhov, V. T. Sorokin and A. E. Kozlov, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2387-2394.

Spanish High Level Radioactive Waste Management System Issues, J. M. Espejo and A. R. Beceiro, [High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p18-24.

Spent Fuel Characteristics Potentially Relevant to Repos-itory Design Assessment, Michael G. Bale and Thomas A. Thormton, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p116-121.

Spent Fuel Characteristics Provided by the CDB—An Update, K. J. Notz, R. Salmon, T. D. Welch, W. J. Reich and R. S. Moore, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p122-130.

Status of Infrastructure Studies and Results, Michael Conroy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program

Committee, 1992), p183-189.

Strategic Planning for Transportation Under the NWPA:
A State Perspective, Douglas Larson and Jim Miernyk,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1730-1736.

Swedith High-Level Radioactive Waste Management Is-sues, Per-Eric Ahlström, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p33-40.

Mahagement rogami continues and Management Sys-tem Issues, C. McCombie, (High Level Radioactive Waste Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p25-27.

Testing and Cobra-SFS Analysis of the VSC-17 Ventilat-ed Concrete, Spent Fuel Storage Cask, Mikal A. McKinnon and Richard C. Schmitt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p764-772.

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, S. L. Marra, R. E. Ed-wards and C. M. Jantzen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924.

management Program Committee, 1992, p917-924.
Transportation, Interim Storage, and Disposal Alternative for Vitrified High-Level Waste, Kenneth Golliher and Charles Witt, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p615-619.

Uncertainty in Regulatory Decision-Making, D. Fehringer and S. Coplan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p106-109.

Universal Storage/Transport/Disposal Packages, Marvin L. Smith, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.228-232.

U.S. Department of Energy Issue Resolution Process, Maxwell B. Blanchard, Michael D. Voegele and Miguel A. Lugo, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1062-1066.

Use of Annotated Outlines to Prepare Guidance for Li-cense Applications for the MRS and MGDS, John Roberts and William R. Griffin, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 21040-1045. p1040-1046.

pt040-1046. Waste Form Development for Immobilization of High Level Waste Calcine at the Idaho Chemical Processing Plant, Krishna Vinjamuri, Swami V. Raman, Dieter A. Knecht and James D. Herzog, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pt261-1271.

Waste Isolation Pilot Plant Robotic Investigation and Study, T. M. Schultheis and J. R. Walls, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p960-965.

Yucca Mountain Digital Database, Carl R. Daudt, Char-lotte Abrams and William J. Hinze, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

Guidance for Decontamination of Debris, Mackenzie L. Davis, Gene P. Chou, William G. Sproat, Jr. and Peter J. Shields, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver

Military Toxics in Hot Water, CE Sept. 92, p30. Pilot Test Vaporizes Hazwaste, CE Nov. 92, p10.

Toxic Metals Reduction Process for Waste Sludge, Joseph G. Rabosky and Kashi Banerjee, (Environmental Engi-neering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p388-393.

Backfill-Stiffened Foundation Wall Construction, Robert Nicholls, (Utilization of Waste Materials in Civil Engi-neering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p286-295.

L. Bergeson, ed., 1992), p.260-293.

Coal Mine Waste Formation and Changes of Microstructure Under Artificial Salting, Krystyna M. Skarzynska and Maria Porebska, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p60-70.

Electric Are Furnace (EAF) Slag as an Aggregate in Asphalt Concrete, Kit M. Lum, Yiik-Diew Wong and Soo-Loi See, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p240-249.

Fenineering Proporties and Potential Uses of Bw-Product

Engineering Properties and Potential Uses of By-Product Phosphygypsum, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p250-263.

FGD Waste Engineering Properties are Controlled by Disposal Choice, Charles L. Smith, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), 944-59.

Highway Construction Use of Wastes and By-Products, Robert J. Collins and Stanley K. Ciesielski, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, p. 140-152.

Improved Resilient Modulus Realized with Waste Prod-uct Mixtures, Seung W. Lee and K. L. Fishman, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1356-1367.

Institutional Constraints to the Use of Coal Fly Ash in Civil Engineering Construction, Timothy N. Kyper, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p32-43.

Mixed Broken Glass Processing Solutions, Nathiel G. Egosi, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p71-80.

Neutralysis: Lightweight Aggregate and Recycling, Robert S. Merdes, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p81-91.

An Overview Wetland Restoration, Protection, and Establishment by Beneficially Using Dredged Material, Mary C. Landin, Thomas R. Patin and Hollis H. Allen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p114-118.

Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, Kwang W. Kim, Bong H. Lee, Je-Seon Park and Young S. Doh, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-

Plastic Waste for Low-Weight Embankments, H. El Ghoche, C. Coulet and D. Daudon, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 368-1379.

Problems Related to Disposal of Fly Ash and its Utiliza-tion as a Structural Fill, Buddhima Indraratna, (Utili-zation of Waste Materials in Civil Engineering Con-struction, Hilary 1. Inyang, ed. and Kenneth L. Berge-son, ed., 1992), p.274-285.

Properties of Tire Chips for Lightweight Fill, Dana N. Humphrey and William P. Manion, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1344-

Resolving Environmental Concerns: Ash Beneficial Re-use, Richard W. Goodwin, (Utilization of Waste Mate-rials in Civil Engineering Construction, Hilary I. In-yang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31.

yang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31.
Scrap Tires Used in Rubber-Modified Asphalt Pavement and Civil Engineering Applications. Michael Blumenthal and Joseph L. Zelibor, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p182-192.
Some Waste Materials in Road Construction, Salem D. Ramaswamy and Mohammed A. Aziz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p153-165.

A Study on the Utilization of Incinerator Pariston Construction, A Study on the Utilization of Incinerator Pariston Construction, A Study on the Utilization of Incinerator Pariston Construction, Construction Construction of Incinerator Pariston Construction, Construction Construction of Incinerator Pariston Construction, Construction Construction, Construction Construction, Construction Construction, Construction, Construction Construction, Construc

1992), p153-165.
A Study on the Utilization of Incinerator Residue for Asphalt Concrete, Kit M. Lum and Joo-Hwa Tay, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergsson, ed., 1992), p217-229.
Technologies for Utilization of Waste Tires in Asphalt Pavement, William E. Eleazer and Morton A. Barlaz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary 1. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p193-201.
Technology Issues for Enhancing Waste Material Utilization

Bergeson, ed., 1992, p. 193-201.
Technology Issues for Enhancing Waste Material Utiliza-tion in Highway Construction Addressed by the SHRP-IDEA Program, K. Thirumalai, Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1902) -1. 1992), p1-8

The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, Ramzi Taha and Donald Saylak, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p264-273.

L. Bergeson, ed., 1992), p264-273.
The Use of Phosphogypsum-Based Slag Aggregate in Hot Mix Asphaltic Concrete, Ramzi Taha and Roger Seals, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p202-216.
Use of Rubber Tires in Highway Construction, Imitiaz Ahmed and C. W. Lovell, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p166-181.

ed. and Kenneth L. Bergeson, ed., 1992), p166-181.

Utilization of Carbide Lime Waste in Asphaltic Concrete Mixes, Mohammed H. Al-Sayed, Ismail M. Madany and W. Al-Khaja, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p230-239.

Utilization of Carbide Lime Waste in Cement Mortar Mixes, Waheeb A. Al-Khaja, Ismail M. Madany and Mohammed H. Al-Sayed, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p320-331.

Utilization of Fly Ash in High Volumes for Low Strength Cement Composites, P. Balaguru, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p308-319.

Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, 0-87262-907-4, 358pp.

son, ed., 1992, 087262-907-4, 538pp.

ttilization of Waste Sulfur in Construction Materials and as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, William C. McBee, Frank E. Ward, William T. Dohner and Harold Weber, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p116-127.

Waste Glass and Sewage Sludge Frit Use in Asphalt Pave-ments, Warren H. Chesner, (Utilization of Waste Mate-rials in Civil Engineering Construction, Hilary I. In-yang, ed. and Kenneth L. Bergeson, ed., 1992), p296-307.

Wasteload allocation
Comparison of Optimization Formulations for Waste-Load Allocations, Donald H. Burn and Barbara J. Lence, EE July/Aug. 92, p597-612.

Wastewater
Effluent Nitrite Accumulation in the Heterotrophic Denitrification of High-Strength Industrial Wastewaters, Srikanth Krishnamachari and William W. Clarkson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-375.

ed., 1992), p370-375.
Measuring Ozone by Indigo Method: Interference of Suspended Material, Mary E. Williams and Jeannie L. Darby, EE Nov./Dec. 92, p988-993.
Oxygen Transfer and VOC Emissions from Sewer Drop Structures, Richard L. Corsi, Jennifer Shepherd, Lori Kalich, Hugh Monteith and Henryk Medcer, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p305-310.

Biol Seale Demonstration of the DWEF Process Con-

A Pilot Scale Demonstration of the DWPF Process Con-trol and Product Verification Strategy, Nick D. Hut-son, Carol M. Jantzen and D. Chris Beam, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p525-532

udge Loading Rates for Forest Land, D. A. Haith, J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar./ Apr. 92, p196-208.

Apr. 94, p.196-208. Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warner, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-779.

T79.

Wastewater disposal

CSO Rehabilitation Strategies for Urban Areas, Larry A.

Roesner and Edward H. Burgess, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p634-660.

Degradation of Ground Water by Tetrachloroethylene, Wendy L. Cohen and Victor J. Izzo, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p63-68.

Design Procedures for Effluent Discharge to Estuaries During Ebb Tide, Tony Webb and Rodger B. Tomlinson, EE May/June 92, p338-362.

Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu A. Patel and Burton D. Sklar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280.

Pietre Linaweaver, ed., 1992, p.275-280.

Wastewater management
Baltimore City's 1989 Sludge Crisis—A Case History,
George G. Balog, Robert T. Mohr and Nicholas H.
Frankos, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p.256-261.
Baltimore Waste Water Infrastructure a Health Plan,
George G. Balog, Gary A. Wyatt and Edward Serp, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p.429-432.
Coupled Water-Wastewater Management Issues, Kip Du-

Coupled Water-Wastewater Management Issues, Kip Du-chon and Robert Troxler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p529-531.

p529-531.

Expert System for Wastewater Collection System Infiltration and Inflow Mitigation, Fadi A. Karaa, Hany H.
Zaghioul and Richard Scholze, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992, p121-128.

Extraction of Potable Water from Urine for Space Applications, Peter J. Holland, Donald M. Bird and Carolyn
L. Miller, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1680-1689.

Groundwater Modeling of Wastewater Management Options, Dominique N. Brocard and Angelos Protopapas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p287-292.

Non-Traditional Water Quality Approaches, Carl P. Houck, Joan Brooks, Ronald D. French and Duane Humble, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438.

Oakland Braces for Storm Overflows, CE Nov. 92, p23.

Oakland Braces for Storm Overflows, CE Nov. 92, p23. Quantity and Quality of Nuisance Water in the Las Vegas Valley, Steve A. Mizell and Richard H. French, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p128-132.

San Francisco Plans Wastewater Storage Tunnel, CE Oct. 92, p22,24.

Waste Water Management at Bulk Terminals, Peter White, (Ports '92, David Torseth, ed., 1992), p178-188.

Water Program Upgrade Set for Down Under, CE Apr. 92, p21.

Wastewater treatment Activity of Biomass in RBC System Treating Pulp Indus-trial Wastewater, Boshou Pan and L. Hartmann, EE Sept./Oct. 92, p744-754.

Sept. Oct. 92, p. 144-154.

Advantages of Installing Influent Fine Screens at a Large
Wastewater Treatment Plant, George G. Balog, Dave
L. Montgomery, Amarit Sokhey, Manu A. Patel and
Norman R. Prima, (Environmental Engineering: Saving a Threatmend Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p287-290.

Alkaline Sludge Stabilization: A "Quick Fix" and Long Term Sludge Management Option for Burlington, North Carolina, Stephen R. Shoaf, Morris V. Brookhart and Gary S. MacConnell, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p399-404.

Baltimore City's 1989 Sludge Crisis—A Case History, George G. Balog, Robert T. Mohr and Nicholas H. Frankos, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p256-261.

Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutanis Entering the Back River Waste Water Treatment Plant, George G. Balog and Ralph O. Cullison, III., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p145-150.

Biochemical Control of Sulfide Production in Wastewater Collection Systems, Ricardo B. Jacquez and Hamdy H. El-Rayes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p327-333.

Boston's City within a City, Paul Tarricone, CE Oct. 92, p40-43

Broward Getting the Most from Its Wastewater, CE Sept. 92, p15,19.

The Caisson Solution, Bennie L. Benjamin, Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47. Canada Explores Sludge-to-Fuel Process, CE June 92,

p18.
Case History: TRE At a Refinery/Chemical Plant, Carol L. La Breche and Russell S. Dykes, (Environmental Engineering: Saving a Threatmed Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p555-560.

Celanese Wastewater Treatment Plant Upgrade, William R. Gluck. (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p281-286.

Linaweaver, ed., 1972., p.201-200.
Chlorination/Dechlorination and Post Aeration Key Operating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p623-627.

tions, F. Pierce Linaweaver, ed., 1992), pb23-627. City of San Diego—Study of Potable Reuse of Reclaimed Wastewater: Final Results, Ken Thompson, Adam W. Olivieri, Don Eisenberg, Robert C. Cooper, Richard E. Danielson and Lori Pettigrew, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl 33-138.

Comparison of Dispersion Models for Wastewater Treatment Emissions, Jin-Sheng Lin and Lynn M. Hildemann, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11.

CSO Rehabilitation Strategies for Urban Areas, Larry A. Roesner and Edward H. Burgess, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p634-660.
Design of Municipal Wastewater Treatment Plants, 2 vols (M&R No. 76), Joint Task Force of the American Society of Civil Engineers and the Water Environment Federation, (Joseph F. Lagnese, chmn.), 1991, 0-87262-834-5, 1632pp.
Designers Cover Tricky Treatment-Plant Site, CE Mar.

esigners Cover 92, p12,14. Tricky Treatment-Plant Site, CE Mar.

92, p12,14.
A Diagnostic Aid for Wastewater Treatment Plants, Catherine D. Perman and Leonard Ortolano, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p86-104.
Dynamic Modeling of VOC Emissions in HPO Process, Chwen-Jeng Tzeng, Roger W. Babcock, Jr., Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linuxeaver, ed., 1992), p67-72.
Environmental Projects Garner Academy's Awards, CE Luly 32, 92

July 92, p27

July 92, p27.

Estimating VOC Emission Rates in Aeration Systems, Chu-Chin Hsieh and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p73-78.

1992), p75-78.
Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, Paul A. Dombrowski and James C. O'Shaughnessy, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p36-41.
Expert System for Anaerobic-Disestion-Process Operation, Michael W. Barnett and John F. Andrews, EE

ion, Michael W. Barnett and John F. Andrews, EE Nov./Dec. 92, p949-963.

Extraction of Potable Water from Urine for Space Applications, Peter J. Holland, Donald M. Bird and Carolyn L. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-1689.

Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, Catherine D. Perman and Leonard Ortolano, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.

Full Scale Side-By-Side Testing of BNR Technologies, Bruce B. Burns, Angela S. Essner, Dave L. Montgomery, Amarjit Sokhey and Manu A. Patel, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p30-33.

Gas Transfer in Diffused Bubble Plumes. Steven C.

Gas Transfer in Diffused Bubble Plumes, Steven C. Withelms and Sandra K. Martin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p317-322.

tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p317-322.

Groundwater Modeling of Wastewater Management Options, Dominique N. Brocard and Angelos Protopapas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p287-292.

Improved Performance of Activated Sludge with Addition of Inorganic Solids, Robert B. Bowen and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p474-479.

Inducer Compounds in the Enricher-Reactor Process, Roger W. Babcock, Jr., Chwen-Jeng Tzeng, Simlin Lau and Michael K. Stenstrom, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p484-473.

An Integrated Expert System for Operating a Petroleum Refinery Activated Sludge Process, Weibo Yuan, Michael K. Stenstrom, (April 1992), p484-473.

An Integrated Expert System for Operating a Petroleum Refinery Activated Sludge Process, Weibo Yuan, Michael K. Stenstrom, Naci H. Ozgur and David Okrent, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p480-485.

Leachate Treatment Helps Landfill Expand, CE Apr. 92, p885.

Leachate Treatment Helps Landfill Expand, CE Apr. 92,

Lessons Learned—Milwaukee Water Pollution Abate-ment Program, Gary D. Beech, ME Apr. 92, p186-191.

Metal Hydroxide and Metal Oxide Enhanced Activated Sludge: An Industrial Strength Wastewater Treatment Process, Robert B. Bowen, [Environmental Engineering: Saving a Threatment Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p646-655.

Metallurgical Residue for Solubilization of Metals from Sewage Sludge, D. Couillard and G. Mercier, EE Sept./ Oct. 92, p808-813.

634

Model Study of Jet-Circulated Grit Chamber, Asher Brenner and Mordechai H. Diskin, EE Nov./Dec. 91,

Model to Design Diffused Aeration System for BNR, Britt D. Bassett, Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23.

Modeling and Pilot-Scale Experimental Verification for Predenitrification Process, J. Hamilton, R. Jain, P. An-toniou, S. A. Svoronos, B. Koopman and G. Lyberatos, EE Jan./Feb. 92, p38-55.

Modeling of Toxic Wastewater Treatment by Expanded-Bed Anaerobic GAC Reactors, G. F. Nakhla and M. T. Suidan, EE July/Aug. 22, p495-512. Motown Tunneling, Paul Tarricone, CE Apr. 92, p60-61.

Municipal Wastewater for Power Plant Cooling Water. Impacts on a Flow-Limited River, Mark Gerath, Fred Sellars, Monique Villars and Lisa Wolf, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p122-127.

Nitrogen Removal at Baltimore's Back River WWTP, Robert J. Andryszak, Amarjit S. Sokhey, Jaswant S. Dhupar and Manu A. Patel, (Environmental Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p617-62.

NonPolar Organics Toxicity in a Municipal Effluent, Car-los H. Victoria-Rueda, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p549-554.

Non-Traditional Water Quality Approaches, Carl P. Houck, Joan Brooks, Ronald D. French and Duane Humble, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438.

Operational Strategies for Predenitrification Process, R. Jain, G. Lyberatos, S. A. Svoronos and B. Koopman, EE Jan./Feb. 92, p56-67.

Oxidation of Bromide by Hypochlorous Acid in Aqueous Solutions: Stoichiometry and Kinetics, N. Phillip and V. Diyamandoglu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p634-639.

Performance of a Denitrification System—Western Branch Wastewater Treatment Plant Phase III Upgrade, Sandra L. Tripp, Loren W. Leach, Karl Deugwilo and Rudy S. Chow, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p12-17.

pH Control in Anaerobic Treatment of Industrial Waste-water, G. K. Anderson and G. Yang, EE July/Aug. 92, p551-567.

Phosphorus Removal by Automatic Backwash Filters at Back River WWTP, George G. Balog, Manu A. Patel Thomas N. Lash and Christian Davies-Venn, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p24-29.

Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu A. Patel and Burton D. Sklar, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280.

Process Offers New Way to Control Nitrogen, CE June 92, p28-29.

Radiation Energy Treatment of Water, Wastewater and Sludge: A State-of-the-Art Report, Task Committee on Radiation Energy Treatment, Air and Radiation Man-agement Committee, Environmental Engineering Divi-sion, (Paul Kruger, chmn.), 1992, 0-87262-901-5, 52pp.

Recycling Wastewater by Drip Irrigation, Win Bui, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p437-

Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, Zhihuai Xue, Zhongling Hua, Qi Li and Naiyi Yao, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p376-381.

Reuse Rules, Herman Bouwer, CE July 92, p72-75.

Sampling of Wastewater Effluent, Heinz G. Stefan, Thomas R. Johnson and Hugh L. McConnell, EE Mar./Apr. 92, p209-225.

Studge Loading Facility at Back River Waste Water Treatment Plant, G. Raymond Schulte, George G. Ba-log, Manu A. Patel and Turgay M. Ertugrul, [Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p303-308.

Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warner, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-779.

Testing an Expert System for the Activated Sludge Process, Wenje Lai and P. M. Berthouex, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p124-146.

The Total System Solution, David J. Daley and James B. Hinte, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647.

Toward a Low-Emissions Wastewater Treatment Plant, Albert B. Pincince, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), pl.-6.

Treatability Study on the Biological Treatment of Land-fill Leachate and Gas Condensate, Bill Y. Liu, Alan Y. Li and James F. Urek, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p405-410.

Type II Sedimentation: Removal Efficiency from Col-umn-Settling Tests, Ravindra M. Srivastava, EE May/ June 92, p438-441.

Urban Infrastructure: Our Crumbling POTW's, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p685-689.

Wastewater under Home Plate, Walter A. Bishop, Jr. and John S. Fraser, CE Oct. 92, p61-63.

Water Reduction as Justification for Permit Backsliding, Gary W. Siegel and Margaret L. Dwyer, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156.

Water Reuse to Gain Water Rights for Hays, Kansas, H. Wayne Gresh and Jeffrey W. Henson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p55-60.

Waterfall Aeration Works, Renso Gasparotto, CE Oct. 92, p52-54.

When Sewer Rehab Doesn't Stop Basement Flooding, Thomas Rowlett and Kenneth Kelgard, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p648-653.

Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutants Entering the Back River Waste Water Treatment Plant, George G. Balog and Ralph O. Cullison, III., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p145-150.

Extraction of Potable Water from Urine for Space Appli-cations, Peter J. Holland, Donald M. Bird and Carolyn L. Miller, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-1689.

Funding of Wastewater Reuse Systems Under the Federal Small Reclamation Projects Act, Robert B. Hamilton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p702-706.

Municipal Wastewater for Power Plant Cooling Water: Impacts on a Flow-Limited River, Mark Gerath, Fred Sellars, Monique Villars and Lisa Wolf, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p122-127.

Recycling Wastewater by Drip Irrigation, Win Bui, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p437-

Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, Zhihuai Xue, Zhongling Hua, Qi Li and Najiy Yao, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p376-381.
Reuse Rules, Herman Bouwer, CE July 92, p72-75.

Reuse Rules, Herman Bouwer, CE July 92, p72-75.

Space Station & Lunar/Mars Life Support Research, Winston Huff, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1690-1700.

Urban Water Management in the 21st Century, Daniel A. Okun, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p150-160.

Water Reuse to Gain Water Rights for Hays, Kansas, H. Wayne Gresh and Jeffrey W. Henson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p55-60.

Four Divisions Gather at Water Forum, CE Oct. 92, p20,22.

Robert W. Day, CF Feb. 92, p46-51.

Overview of Permeable Bases, Robert H. Baumgardner, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p275-287.

Water allocation policy
Evaluation of the Model Water Code from an Environmental Ethic Perspective, Margot W. Garcia, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p231-236.

Karamouz, ed., 1972.), p.231-20.
Global Change and Regional Water Resources, Nathan Buras, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.25-32.

Impact of Water-Quality Policies on Water Availability, Thomas S. Maddock, El Oct. 90, p333-344.

Thomas S. Madouck, El Oct. 19, p.535-304-in Operation of the Central Valley Project During Califor-nia's Drought, John F. Burke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Esgman, ed., 1992), p348-353.

Urban Water Management in the 21st Century, Daniel A. Okun, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p150-160.

Water Demand Management in the Las Vegas Valley Re-gion, Timothy D. Feather and Nick Braybrooke, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p44-49.

mad Karamouz, ed., 1992), p44-49.
Water Management Under Drought Conditions an Overview of Practices by Federal Agencies, Donald K. Frevert and Dartell G. Fontane, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p601-605.
What Should the ASCE Model Water Code Committee Do? Leonard Shabman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p237-241.

# Water analysis

Sensor Can Get the Lead Out, CE Oct. 92, p8.

# Water balance

Modeling Irrigation Schedules for Lowland Rice with Sto-chastic Rainfall, Aftab H. Azhar, V. V. N. Murty and H. N. Phien, IR Jan./Feb. 92, p36-55.

Moisture and Suction in Sanitary Landfills in Semiarid Areas, G. E. Blight, J. M. Ball and J. J. Blight, EE Nov/Dec. 92, p865-877.

Stochastic Model for Soil Moisture Deficit in Irrigated Lands, D. Mukherjee and N. T. Kottegoda, IR July/Aug. 92, p527-542.

Water Quantity and Quality for Irrigated Agriculture and Wetlands, E. P. Chambers and J. C. Guttjens, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p431-436. Water-Balance Model of Two Conservancies in Guyand, J. de Beer and L. Bacchus, IR July/Aug. 92, p513-519.

Water chemis

Permanence of Grouted Sands Exposed to Various Water Chemistries, John M. Siwula and Raymond J. Krizek, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1403-1419.

Water circulation
Circulation Modelling and Water Quality Prediction,
Hans Jacob Vested, Ole Krull Jensen, Ann Christina
Ellegaard, Hanne Karin Bach and Erik Koch
Rasmussen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed.,
1992), p317-331.

17721, p317-331.
Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p337-369.

Preliminary Circulation Simulations in Apalachicola Bay, T. S. Wu and W. K. Jones, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p344-356.

Swanson, ed., 1992), p344-356.
Simulation of Three-Dimensional Hydrodynamics in
Long Island Sound: Seasonal Timescale, Eugene J. Wei,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph
Cheng, ed. and Craig Swanson, ed., 1992), p430-440.
Simulation of Three-Dimensional Hydrodynamics in
Long Island Sound: Annual Timescales, Richard A
Schmalz, Jr., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed.,
1992), p441-452.

Three-Dimensional Circulation Modeling of the Coastal

Three-Dimensional Circulation Modeling of the Coastal and Ocean Environments, Keh-Han Wang, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), p637-651.

New York Water-Tunnel Section Finished After 22 Years, CE Sept. 92, p12.

Water Conservation
The 1991 Revolution in Water Management, George R. Baumli, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p322-327.
Design and Operation of On-Farm Irrigation Ponds, Brijesh Kumar Mehta and Akira Goto, IR Sept./Oct. 92,

Development of a Water Conservation Program for the Spring Valley Water Company, Frank Gradilone, III., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p754-759.

Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992, 0-87262-877-9, 634pp.

Liner Helps Resort Survive Drought, CE Oct. 92, p88

The Monitoring of Water Conservation Behavior and Attitudes in Southern California, Duane D. Baumann, Eva Opitz and Diane Egly, (Risk Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p117-134

134.
Planning for Water Conservation Through Irrigation System Modernization and Rehabilitation, A. K. Dimmitt, K. I. McLaughlin, F. Z. Kamand and D. G. Welch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299.

Reclaimed Water, Irrigation, and Conservation Pricing, Ronald E. Young, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p161-162.

Research/Application of System Engineering to Water Resources Systems, Dingzhong Dai, Xueren Lu, Yuan-yu Guo and Xinyi Xu, WR May/June 92, p337-349.

yu Guo and Anji Au, Wk maysium 22, p53/5-347. Solving MWRA's Supply Issues Through Conservation, Marcis Kempe, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p163-168

Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warner, (Water Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-779.

779.
Technology Transfer Lessons from a U.S. Water District, Douglas Welch and Karen McLaughlin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p203-208.
The U.S. Bureau of Reclamation—New Directions in Water Management and Conservation, Allen R. Powers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p232-237.

1992), p232-237.
Water Demand Management in the Las Vegas Valley Region, Timothy D. Feather and Nick Braybrooke, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p44-49.
Water Suredy Operations During Drought, this Shyang

mau Karamouz, ed., 1992), p44-49.
Water Supply Operations During Drought, Jhih-Shyang Shih and Charles ReVelle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p310-315.

Water Use in Saudi Arabia: Problems and Policy Implica-tions, Abdulla Ali Al-Ibrahim, WR May/June 90,

p375-388.

636

Water consumption
Demand Management Strategies for Providence Water
Supply Board, Arun K. Deb, Frank M. Grablutz and
Paul Gadoury, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p169172.

Equation for Evaporation Pan to Evapotranspiration Conversions, Richard L. Snyder, IR Nov./Dec. 92, p977-980.

Evapotranspiration Data Management in California, R. L. Sayder and W. O. Pruitt, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p128-133.

Water content

Effect of Water on the Consolidation of Crushed Rock
Salt, M. L. Wang, S. K. Miao, A. K. Maji and C. I.
Hwang, Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), p531-534.

Equations for Compression Index Approximation, A. W.
N. Al-Khafaji and O. B. Andersland, GT Jan. 92,
p.148-153.

pl48-133.

Fealuation and Control of Collapsible Soils, Adnan A. Basma and Erdil R. Tuncer, GT Oct. 92, pl491-1504.

Fealuation of Soil Water Sensors in Frozen Soils, John L. Nieber, John M. Baker and Egbert J. A. Spaans, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992),

p168-181. Hydrocompression Settlement of Deep Fills, Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, p1536-1548.

GT Oct. 90, p1536-1548.

Hydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, Victor R. Hasfurther and John P. Turner, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p395-400.

Installation and Monitoring of Thermal Conductivity Suction Seasons in a Fine-Grained Subgrade Soil Subjected to Seasonal Frost, Walaa E. I. Khogali, Kenneth O. Anderson, Julian K. Gan and Delwyn G. Fredlund, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoe, ed. and Robert A. Eaton, ed., 1992), p153-167.

Rapid Water Content by Computer-Controlled Microwave Drying, Paul A. Gilbert, GT Jan. 91, p118-138.

Water Content-Density Criteria for Compacted Soil Liners, David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830.

# Water demand

Adequacy of Surface Water-Supply Systems: Case Study, Krishan P. Singh, Sally M. Broeren and Ali Dur-gunoğlu, WR Nov./Dec. 92, p620-635. California Plumbs Toilet Fixture Possibilities, CE Jan. 92, p22,24.

P., P.Z.L.<sup>24</sup>.
 A Demand Driven Decision Support System for Operation of Reservoirs, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p561-565.

Demand Management Strategies for Providence Water Supply Board, Arun K. Deb, Frank M. Grablutz and Paul Gadoury, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p169-

The Desalination Situation, John Prendergast, CE Aug. 92, p42-44.

Design and Operation of On-Farm Irrigation Ponds, Bri-jesh Kumar Mehta and Akira Goto, IR Sept./Oct. 92,

Development of a Water Conservation Program for the Spring Valley Water Company, Frank Gradilone, III., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p754-759.

mau Karamouz, ed., 1992, p.794-793.
Development of Storage Demand Relation for Reservoirs—A Probabilistic Approach, Hormoz Pazwash, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p549-554.

mau Karamouz, ed., 1992), post9-53-8. Feasibility of Water Supply for City of Houston Subsidence Zones Five and Six, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p480-485.

Ground Water Management in Arkansas, Jonathan Ray Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p110-115.

Groundwater Management in Southern Florida, Mark M. Wilsnack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ened Resource-In S ed., 1992), p104-109.

Houston Intercontinental Airport Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloth, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

An Innovative Institutional Arrangement Which Incorpo-rates the Risk Preferences of Water Users, Norman J. Dudley, (Risk-Based Decision Making in Water Re-sources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p174-199.

Managing Lower Colorado River, Daniel P. Sheer, Timo-thy J. Ulrich and Mark H. Houck, WR May/June 92, p324-336.

Managing Water Supply with Aquifer Storage and Recovery, Thomas J. Buchanan and Margaret A. Ibison, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p426-431.

Modeling Instantaneous Residential Demands in Municipal Water Distribution Systems, Brian D. Barkdoll and Steven G. Buchberger, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p62-67.

Operation of the Tennessee Valley Authority Water Con-trol System Under Extreme Drought Conditions, H. Morgan Goranflo, Jr., (Irrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-365.

Optimal Capacity Expansion in Multi-Aquifer Systems, Hasan Yazucgil, (Water Resourcer Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p432-

Predicting Water Demand in Agricultural Regions Using Time Series Forecasts of Reference Crop Evapotranspiration, John C. Tracy, Miguel A. Mariño and S. Alireza Taghavi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p50-55.

Reliability of Operating Rules with or without Uncertain Forecasts, Haralambos V. Vasiliadis and Mohammad Karamouz, (Water Resources Planning and Management: Saring a Threatened Resource—In Search of Sohutions, Mohammad Karamouz, ed., 1992), p679-684.

Millows, Mohamman Karamouz, ed., 1974, po 17-00-1.
Rural-Urban Water Transfers in Nevada: Solution or
Problem? John W. Fordham, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p492-497.
Solvins MWPA 1's Surpoly Issues Through Conservation

Solving MWRA's Supply Issues Through Conservation, Marcis Kempe, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p163-168

Urban Water Management in the 21st Century, Daniel A. Okun, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p150-160.

Mohammao Karamouz, ed., 1992), p130-160. Water Availability and Water Demand Study for the Citanduy River Basin, West and Central Java, Indonesia, R. Joseph Berspuist and Ed A. Toms, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p328-331.

Karamouz, ed., 1972.), p.26-331.
Water Demand Management in the Las Vegas Valley Region, Timothy D. Feather and Nick Braybrooke, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p44-49.

Water Planning Using an Expert GIS, Daene C. McKinney, David R. Maidment and Mustafa Tanriverdi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p219-224.

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, 0-87262-876-0,

Water Supply Operations During Drought, Jhih-Shyang Shih and Charles ReVelle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p310-315.

Water Use in Saudi Arabia: Problems and Policy Implica-tions, Abdulla Ali Al-Ibrahim, WR May/June 90, p375-388.

The Application of Ultrasonic Surface Detectors to Hop-per Dredge Production Monitoring, Stephen H. Scott and Angela Freeman, (Hydradulic Engineering; Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1018-1023.

John B. Herbich, Dilip Trivedi, Gordon Wilkinson and Allen Teeter, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082.

A. Hugues, 67, 1725, ph/03-1022.
Simulated Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), pl

Velocity Distribution Inside and Above Branched Flexi-ble Roughness, Omnia El-Hakim and Mohamed M. Sa-lama, IR Nov./Dec. 92, p914-927.

Water discharge

Assessment of Impacts Associated with Alternate Cooling System Designs for an Electric Power Station, Steven H. Wolf, James D. Bowen, Donald P. Galya and Frank S. Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231.

Design Procedures for Effluent Discharge to Estuaries During Ebb Tide, Tony Webb and Rodger B. Tomlin-son, EE May/June 92, p338-362.

Linking Data Bases to Hydraulic Computations, Brian R. Turcotte and N. Davies Mtundu, CP Jan. 92, p63-71.

Municipal Field Screening Analyses, Gene N. Rattan and John L. McDaniel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p50-

53. Ongoing Monitoring Results Pilot Stormwater Disposal Facilities, Pierce County, Washington, Molly Adolfson and Dan Clark, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p510-515

mall Parshall Flume Rating Correction, Steven R. Abt, Christopher Cook, Kenneth J. Staker and Derek D. Johns, HY May 92, p798-803.

Water distribution

Basic Planning and Design of a Water Utility Information
System, Chun-Hou Orr, Bryan Coulbeck, Sergio T.
Coelho and Helena Alegre, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p340-345.
Calculating Flow in Manifold and Orifice System, Fazal
H. Chaudhry and Luisa F. R. Reis, EE July/Aug. 92, p383-596.

p585-596.

Combined Allocation and Operation Model, Wytze Schuurmans and Wil N. M. van der Krog, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p269-274.
Cost of Rehabilitation of Water Distribution Systems, Peter K. Mac Ewen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p770-771.

Design and Maintenance Faccused Search Communication of the Search of Solutions, Mohammad Karamouz, ed., 1992), p770-771.

p770-771.
Design and Maintenance Factors Affecting Application
Uniformity of Low Pressure Center-Pivot Irrigation
Systems, Brian K. Briggs, K. James Fornstrom and Larry Pochop, Urrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman,
ed., 1992), p257-262.

Design of Irrigation Distribution System, Steve Robertson, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p462-467.

1992, p402-401.

Bevelopment of a Phase I Prescriptive Reservoir Model, Robert D. Carl, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p667-

O72.

Dynamic Plug Flow Reactor Network Model for Contaminant Transport in Water Distribution Systems, James Uber, Ken Hickey, Mao Fang and Lew Rossman, (Hydraulic Engineering, Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p772-777.

Efficient Calculation of Transient Flow in Simple Pipe Networks, Bryan W. Karney and Duncan McInnis, HY July 92, p1014-1030.

Energy Efficient Pump Station Operation with a Pump Switching Constraint, Kofi Awumah and Kevin E. Lansey, (Water Resources Hanning and Management. Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p604-609.

Entropy-Based Reduudancy Measures in Water-Intropy-Based Reduudancy Measures in Water-International Control of the Contro

Entropy-Based Redundancy Measures in Water-Distribution Networks, Kofi Awumah, Ian Goulter and Suresh K. Bhatt, HY May 91, p595-614.

Suresn R. Bhall, HY May 91, p393-b14.
Groundwater Recharge as a Reclaimed Water Transport
Mechanism, Thomas G. Richardson and Nereus L.
Richardson, Elevironmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p61-66.
Houston, Intercontinental Airport, Water, Service Aces

Linaweaver, ed., 1992), pol-06.
Houston Intercontinental Airport Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloto, (Hydraulic Engineering Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

1992), p587-592.
In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, (Environmental Engineering: Saving a Threamend Resource—In Search of Solutions, F. Preirce Linaweaver, ed., 1992), p334-339.
Integration of AM/FM/GIS with MODELING/DESIGN on Large Utility PC Network, J. Darrell Bakken and Charline M. Avey, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

Modeling Instantaneous Residential Demands in Munici-pal Water Distribution Systems, Brian D. Barkdoll and Steven G. Buchberger, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 25.4.5.7

p62-67.

Modeling of a Large-Scale Water Distribution System, Nien-Sheng Hsu, Peter W. F. Louie and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p598-603.

Multilayered, Priority-Based Simulation of Conjunctive Facilities, Elizabeth S. Andrews, Francis I. Chung and Jay R. Lund, WR Jan-Teb. 92, p32-53.

Multireservoir Sewer-Network Control via Multivariable Feedback, A. Messmer and M. Papageorgiou, WR Nov/Dec. 92, p585-602.

Optimal Irrigation Delivery System Design under Uncer-

Optimal Irrigation Delivery System Design under Uncertainty, Timothy K. Gates, Abdulmohsen A. Alshaikh, Samir I. Ahmed and David J. Molden, IR May/June 92, p433-449.

638

Optimal Locations of Monitoring Stations in Water Dis-tribution System, Byoung Ho Lee and Rolf A. Dein-inger, EE Jan./Feb. 92, p4-16.

Optimal Pump Scheduling in Water-Supply Networks, Paul W. Jowitt and George Germanopoulos, WR July/

Aug. 92, p406-422.
Optimal Upgrading of Hydraulic-Network Reliability,
Lindell Ormsbee and Avner Kessler, WR Nov./Dec. 90,

Optimization Model for Alternative Use of Different Quality Irrigation Waters, Javaid Afzal, David H. Noble and E. K. Weatherhead, IR Mar./Apr. 92, p218-

Noble and E. K. Weatherhead, IR Mar/Apr. 92, p.218-228.
Optimization-Availability-Based Design of Water-Distribution Networks, M. John Cullinane, Kevin E. Lansey and Larry W. Mays, HY Mar. 92, p.420-441.
Planning and Operation of a Multi-Reservoir Water Distribution System, Ali Diba, Peter W. F. Louie, Manouchehr Mahjoub and William W.G. Yeh, (Water Resource-Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.316-321.
Polyolefin Plastic Water Service Line Performance, Richard E. Chambers, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p.385-397.
Rational Approach for Modifying Rotational Water Delivery Schedule, Sanjay Bhirud, N. K. Tyagi and C. S. Jaiswal, IR Sept/Oct. 20, p.632-644.
Rationalizing Water Requirements with Aid of Fuzzy Allocation Model, Janusz Kindler, WR May/June 92, p.308-323.

p308-323

ps08-323.

Rehabilitating Irrigation Systems from the 20th Century for the 21st Century, Gary L. Parker, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p281-285.

A Review of Current UK Techniques for Rehabilitating Water Mains, M. P. Jones, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p764-769.

Systems Analysis in Water-Distribution Network Design.

Systems Analysis in Water-Distribution Network Design: From Theory to Practice, I. C. Goulter, WR May/June 92, p238-248.

92, p.238-248.
Transient Hydraulic Model for Simulating Canal-Network Operation, F. N. Gichuki, W. R. Walker and G. P. Merkiey, IR Jan./Feb. 90, p67-82.
Water Main Rehabilitation Needs for the 1990's, D. Kelly O'Day, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p760-763.
Water Main Rehabilitation Using Silicote Lining, Steven E. Cooper and Gregory C. Heitzman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p772-773.
Water Management Under Drought Conditions an Over-

Karamouz, ed., 1992), p772-773.
Water Management Under Drought Conditions an Overview of Practices by Federal Agencies, Donald K. Frevert and Darrell G. Fontane, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p601-605.
Working Conditions of Sprinkler to Optimize Application of Water, José Mari Tarjuelo Martín-Benito, Manuel Valiente Gómez and Juan Lozoya Pardo, IR Nov./Dec. 92, p895-913.

### Water flow

Air Entrainment by Spillway Aerators, Peter Rutschmann and Willi H. Hager, HY June 90, p765-782.

Approximation of Convective Processes by Cyclic AOI Methods, Guus S. Stelling and Jan J. Leendertse, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p771-782.

Bridge Pier Scour with Debris Accumulation, Bruce W. Melville and D. M. Dongol, HY Sept. 92, p1306-1310.

A Brief Literature Review of Open-Channel Current Meter Testing, Kirk G. Thibodeaux, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p458-463.

Characteristics of U.S. Geological Survey Discharge Measurements for Water Year 1990, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p452-457.

and Nani G. Bhowmik, ed., 1992), p432-437.

Computational Model Verification Test Case Using Flume Data, Yafei Jia and Sam S-Y. Wang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p436-441.

Debris Torrents and Professional Responsibilities, S. O. Russell, El Jan. 90, p49-55.

Drownproofing of Low Overflow Structures, Hans J. Leu-theusser and Warren M. Birk, HY Feb. 91, p205-213.

EQSWP: Extended Unsteady-Flow Double-Sweep Equation Solver, Theodor Strelkoff, HY May 92, p735-742.

Estimating the Consequences of Significant Fracture Flow at Yucca Mountain, John H. Gauthier, Michael L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p891-898.

Flow in Trapezoidal Channels, W. E. Hart, B. P. Thoreson and S. A. Musil, IR Nov./Dec. 92, p971-976.

Hyperconcentrated Sand-Water Mixture Flows over Ero-dible Bed, Johan C. Winterwerp, Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1525.

Local Scour at Bridge Abutments, B. W. Melville, HY Apr. 92, p615-631.

Mass Transfer of Volatile Contaminants in Showers, John C. Little, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Mesh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, Kirk G. Thibodeaux, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p323-328.

and Nani G. Bhowmik, ed., 1992), p523-528.
Modeling of a Large-Scale Water Distribution System,
Nien-Sheng Hsu, Peter W. F. Louie and William W-G.
Yeh, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p598-603.

Open Boundary Condition for Multiple Level FE Tidal Current Flow Analysis, Toshio Kodama and Mutsuto Kawahara, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), p442-447.

Real-Time Simulation and Visualization of 2-D Surface Water Flow, H. C. Lin, N. L. Jones and D. R. Richards, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-340.

Recent Criteria for Design of Groins, Cassie C. Klumpp and Drew C. Baird, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p828-

633.
Reflection and Transmission of Water Wave by Porous Breakwater, L. H. Huang and H. I. Chao, WW Sept./Oct. 92, p437-452.
Riprap Stability Under Impinging Flow, James R. Leech, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p138.

Skimming Flow in Stepped Spillways, N. Rajaratnam, HY Apr. 90, p587-591.

A Three-Dimensional Tidal Circulation Model Based on Semi-Implicit Finite-Difference Methods, Ralph T. Cheng and Vincenzo Casulli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p428-429.

Transportation of Demineralized Water: Case Study, Ali A. Quraishi and Muhammad S. Al-Amry, TE July/Aug. 92, p576-585.

A TVD MacCormack Method for Open Water Hydraulics and Transport, A. M. Wasantha Lal, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p494-499.

Two-Dimensional Analysis of Furrow Infiltration, T Vogel and J. W. Hopmans, IR Sept./Oct. 92, p791-806.

Using Seals to Control Flow at Yucca Mountain, John A. Blair, Dean Stucker and Prasanna Kumar, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1196-1199.

Vadose Zone Composite Hydraulic Conductivity, Shu-Tung Chu, IR Sept./Oct. 92, p822-827.

Velocity Distribution in Uniform Sediment-Laden Flow, Motohiko Umeyama and Franciscus Gerritsen, HY Feb. 92, p229-245.

Verification of a Three-Dimensional Modeling in Apalachicola Bay, T. S. Wu, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427.

Wave-Motion Stability in Canals with Automatic Con-trollers, Simion Hancu and Paul Dan, HY Dec. 92, p1621-1638.

WSPRO Files for Slope-Area Computations, Janice M. Fulford, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334.

Efficient Calculation of Transient Flow in Simple Pipe Networks, Bryan W. Karney and Duncan McInnis, HY July 92, p1014-1030.

Spline Interpolations for Water Hammer Analysis, I. A. Sibetheros, E. R. Holley and J. M. Branski, HY Oct. 91, p1332-1351.

## Water inflitration

Estimating the Consequences of Significant Fracture Flow at Yucca Mountain, John H. Gauthier, Michael L. Wilson and Franz C. Lauffer, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), ep. 1901. Waste N p891-898

po51-596. A Numerical Study of Water Percolation through an Unsaturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, C. F. Tsang, J. Noorishad and F. V. Hale, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p304-309.

Strontium Isotope Geochemistry of Calcite Fracture Fil-lings in Deep Core, Yucca Mountain, Nevada—A Pro-gress Report, Z. E. Peterman, J. S. Stuckless, B. D. Marshall, S. A. Mahan and K. Futa, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p. 1582-1582. p1582-1586.

Water Penetration in Laterally Loaded Brick-Wall Panels, J. O. Arumala, MT Nov. 92, p432-436.

Model Study of Jet-Circulated Grit Chamber, Asher Brenner and Mordechai H. Diskin, EE Nov./Dec. 91, p782-787.

Evaluation of the Model Water Code from an Environ-mental Ethic Perspective, Margot W. Garcia, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p231-236.

Is An Instream Flow Need a Beneficial Use? Robert T. Milhous, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p368-373.

Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230.

Automated Operation of Pumping Stations in Russia, Yuri A. Ermolin and Leonid I. Zats, IR July/Aug. 92, p555-563.

p535-563.

Dynamic Compaction: Predicting Depth of Improvement, Vince Luongo, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p927-939.

Engineering Answers to Groundwater Impact Questions Using a Geographic Information System (GIS), Paul E. Albertson and Albert N. Williamson, (Irrigation and Drainage; Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p505-510.

Probabilistic Analysis of Groundwater Levels in Hillside.

Solutions, Ted Engman, ed., 1992), p303-310.
Probabilistic Analysis of Groundwater Levels in Hillside Slopes, Lakshmi N. Reddi and Tien H. Wu, GT June 91, p872-890.
Probability of Wave Force on Horizontal Members, Laurence Z. H. Chuang and C. C. Tung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), a427-480.

p467-480. Remote Automated Wave and Water Level Monitoring System Deployed at Agat Harbor, Guam, David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p898-907. Stage-Discharge Relationship in Tidal Rivers, N. El-Jabi, G. Wakim and S. Sarraf, WW Mar/Apr. 92, p166-174.

G. Wakim and S. Sarral, Ww Mar/Apr. 22, p100-174. Study of Open-Channel Dynamics as Controlled Process, Yuri A. Ermolin, HY Jan. 92, p59-72. Two-Dimensional Circulation Modeling of the Pamlico River Estuary, North Carolina, G. L. Giese and Jerad D. Bales, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), e607.510 [192]. Raiph Ch p607-619.

Water-Balance Model of Two Conservancies in Guyana, J. de Beer and L. Bacchus, IR July/Aug. 92, p513-519. Water-Level Control in Hydropower Plants, Oscar F. Jiménez and M. Hanif Chaudhry, EY Dec. 92, p180-

Water-Level Oscillations in Esperance Harbour, Michael L. Morison and Jörg Imberger, WW July/Aug. 92, p352-367.

## Water loss

Incorporating Hydraulic Structures in an Open-Channel Model, Eric D. Swain, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1118-1123.

Water management
The 1991 Revolution in Water Management, George R.
Baumli, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p322-327.
Broad-Crested Weir Application on 15,000-Acre Farm, S.
W. Styles, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman,
ed., 1992), p300-304.
Climate Change and Water Management Flexibility, Lin-

Climate Change and Water Management Flexibility, Linda L. Nash, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-522.

ed., 1992), p517-522.
Combined Allocation and Operation Model, Wytze Schuurmans and Wil N. M. van der Krogt, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eagman, ed., 1992), p269-274.
Conjunctive Use—Advantages, Constraints, and Examples, Jack J. Coe, IR May/lune 90, p427-443.
Coupled Water-Wastewater Management Issues, Kip Duchon and Robert Troxier, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p529-531.
Effects of Drainage and Water-Management Practices on

Effects of Drainage and Water-Management Practices on Hydrology, K. D. Konyha, R. W. Skaggs and J. W. Gil-liam, IR Sept./Oct. 92, p807-819.

Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p.25.

ET from Shallow Groundwater Maintained by Controlled-Drainage/Subirrigation System, James L. Fouss and James S. Rogers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p594.

Evapotranspiration in Sudan Gezira Irrigation Scheme, Ahmed S. A. Hussein and Ahmed K. El Daw, IR Nov./ Dec. 89, p1018-1033.

Global Warming and Possible Effects on the Central and

Globai Warming and Possible Effects on the Central and Southern Florida Project, James W. Vearil, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad

ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), pl3-18.

Hillsboro Basin Surface Water Management Model, David P. Preusch, Jayantha Obeysekera, John M. Crouse and Kendrick Logsdon, (Water Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p810-816.

Hydrologic Model for Drained Forest Watershed, E. J. McCarthy, J. W. Flewelling and R. W. Skaggs, IR Mar/Apr, 92, p242-255.

An Innovative Institutional Arrangement Which Incorpo-

Nydrologic Model for Drained Forest watershee, E. J. McCarthy, J. W. Flewelling and R. W. Skaggs, IR Mar/Apr. 92, p242-255.

An Innovative Institutional Arrangement Which Incorporates the Risk Preferences of Water Users, Norman J. Dudley, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p174-199.

An Interagency Program to Improve Irrigated Agriculture, A. R. Dedrick, W. Clyma, A. J. Clemmens, R. D. Gibson, J. A. Replogle, R. E. Ware, P. N. Wilson and D. B. Levine, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600.

Irrigation Land Management Model, Roy A. Steiner and Andrew A. Keller, IR Nov/Dec. 92, p928-942.

Meteorological Aspects of Drought, Richard L. Eddy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p329-333.

Plastic Pipe Takes Sewer Under Creek, CE July 92, p94.

Rational Approach for Modifying Rotational Water Delivery Schedule, Sanjay Bhirud, N. K. Tyagi and C. S. Jaiswal, IR Sept. Oct. 90, p632-644.

Rehabilitating Irrigation Systems with USDA Water Quality Programs, John D. Hedlund, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293.

Reservoir Water Quality Modeling in Northern Portugal—Some Case Studies, A. C. Rodrigues and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohamm ad Karamouz, ed., 1992), p804-809.

Reuse Simulation in Irrigated River Basin, L. K. Smedema, W. Wolters and P. J. Hoogenboom, IR Nov/Dec. 92, p841-851.

ma, W. Wolters and P. J. Hoogenboom, IR Nov./Dec. 92, p841-851.
Urban Water Management in the 21st Century, Daniel A. Okun, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p150-160.
The U.S. Bureau of Reclamation—New Directions in Water Management and Conservation, Allen R. Powers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p232-237.
Water Data of the International Boundary and Water Commission, Conrad G. Keyes, Jr. and Kenneth N. Rakestraw, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p584-589.
Water Management as an Instrument for Cooperation

ed., 1992), p584-589.

Water Management as an Instrument for Cooperation and Reconciliation, Charles G. Gunnerson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p724-729.

Water Management Under Drought Conditions: An Overview of Practices by Non-Federal Entities, Darrell G. Fontane and Donald Frevert, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p554-359.

Water Use in Saudi Arabia: Problems and Policy Implications, Abdulla Ali Al-Ibrahim, WR May/June 90, p375-388.

What Should the ASCE Model Water Code Committee Do? Leonard Shabman, (Water Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p337-248.

Water pipelines

Water paperson

Building a Pipeline—Not a "Flow Through" Process,
Roddy Rogers, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p591-

391. Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, John L. Merriam, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p623-630.
Dallas Goes Trenchless, A. V. Almeida, CE Sept. 92,

Dallas Goes Trenchless, A. V. Almeiua, David p71-73.
GIS: New York's Pipe Dream, Harvey P. Moutal, David R. Bowen and Wendy Dorf, CE Feb. 92, p66-67.
Water Main Rehabilitation Needs for the 1990's, D. Kelly O'Day, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solitions, Mohammad Karamouz, ed., 1992), p760-763.
Water Main Rehabilitation Using Silicote Lining, Steven E. Cooper and Gregory C. Heitzman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p772-773.

water plans
Computer Model Aids Water Planning, CE July 92, p28.
GIS, Remote Sensing, and Master Water Plan: A Case
Study, Uzair M. Shamsi, (Computing in Civil Engineering and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992),
p695-702.

Water policy
Urban Water Management in the 21st Century, Daniel A.
Okun, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p150-160.
Water-Projects Bills, Casey Dinges, CE May 92, p122.

Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p150-160.

Water-Projects Bills, Casey Dinges, CE May 92, p122.

Water pollution
Application of Three-Dimensional Lagrangian Residual Transport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, HY June 92, p831-848.

Atrazine Biodegradation in Biological GAC Columns, M. K. Banks and C. M. Huang, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p516-519.

Benthic Exchange of Toxic Contaminants, Steve C. McCutcheon and Danny Reible, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p386.

Diversion Oil Booms in Current, M. Robinson Swift, Barbaros Celikkol, Gilles LeCompagnon and Chris E. Goodwin, WW Nov./Dec. 92, p587-598.

Land Use and Imperviousness Information Acquisition, Ming T. Lee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p363-368.

Landfill Storm Water Runoff Control, Paul Makowski and Daniel Pazdersky, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Mass Transfer of Volatile Contaminants in Showers, John C. Little, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Mass Transfer of Volatile Contaminants in Showers, John C. Little, Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168.

Model for Pollutant Transport by Eddy Simulation, E. R. Holley, Y. C. Su, G. H. Ward and R. de Souza, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p387-389.

NCASI Experiments Related to Validation of Sediment-Water Column Exchange Models for Hydrophobic Chemicals, Steven W. Hinton and Ray C. Wh

Pilot-scale Anaerobic Ezological Removal of Selenium from Agricultural Drainage Water Using Sequencing Batch Reactors, Lawrence Owens, Kenneth Johnson and Kapil Sabharwal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pieroc Linaweaver, ed., 1992), 9445-450.

Predicting Fate and Effects of Hydrocarbons in the Oceans, Richard A. Geyer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p356-369.

The Proposed Waste Management Plan for Dairy Farm Wastes Polluting the Tangipahoa River and Lake Pontchartrain, Gianna M. Jones, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pieroe Linaweaver, ed., 1992), p656-661.

Rehabilitating Irrigation Systems with USDA Water

Sotutions, F. Pierce Linaweaver, ed., 1992), p656-661. Rehabilitating Irrigation Systems with USDA Water Quality Programs, John D. Hedlund, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293. Spatial Decision Support System for Toxic Spill Mode-ing in the Ohio River, Walter M. Grayman, Jason P. Heath and Richard M. Males, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p74-78. Statistical Evaluation of Mechanistic Water-Quality

Statistical Evaluation of Mechanistic Water-Quality Models, Kenneth H. Reckhow, J. Trevor Clements and Randall C. Dodd, EE Mar./Apr. 90, p250-268.

Water pollution control
Analytical Prediction of Gasoline Thickness on the Water
Table, M. Yavuz Corapcioglu, Rajasekhar Lingam and
Vern K. Haisler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p.254-259.

239.
Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G. Balog, William P. Stack, Kenneth T. Belt and Nathan J. Beil, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503.

Delaware Estuary Nonpoint Source Control Program, William Whipple, Jr. and Van Dyke Polhemus, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p718-723.

Naramouz, ed., 1992), p718-723.

Developing an Industrial Toxics Management Program, Kathleen O. Gill and Tatiana Gianella, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p42-48.

Evaluation of BAT for VOCs in Drinking Water, Robert M. Clark and Jeffrey Q. Adams, EE Mar/Apr. 91, p247-268.

Flux of Metals Between Sediment and the Water Column, N. S. Simon and K. O. Dennen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik. ed., 1992), p390-391.

Implementing a Wellhead TCE Removal Project in Red-lands, Richard Corneille and Michael Huffstutler, En-vironmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p315-320.

essons Learned—Milwaukee Water Pollution Abate ment Program, Gary D. Beech, ME Apr. 92, p186-191.

ment Program, Gary D. Beech, ME Apr. 92, p186-191.

Loading of Nutrients to Groundwater From High Source
Areas During the Winter Period, Paul D. Robillard and
Michael F. Walter, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p573-578.

po 13-578.
Modeling of CSO Impacts in Jamaica Bay and Tributaries, John P. St. John, William M. Leo and Robert Gaffoglio, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-95.

et. and Ivani U. Browmis, etc., 1992, p90-95.
Modeling Variable Width Buffer Zones with a Geographic Information System, Gary Ostroff, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p213-218.

Nitrogen Removal from a High-Strength Ammonia Leachate, Maria Pia Mena, John Fillos and Jifang Zhu, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p417-422.

North Central Texas Municipalities Address the NPDES Stormwater Regulations Through Regional Coordination, George E. Oswald, Alan H. Plummer and Robert W. Brashear, (Hydraulic Engineering: Saving a Threatender Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p62-63. NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, Paul Makowski and John G. Garland, III., (Hydraulic Engineering: Saving a Threatend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p797-802.

Perceptions, Sensitivity, and Solutions; Water Quality 2000, John B. Pearce, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-43.

p39-43.

Pollution Control Under the NPDES Stormwater Program, Thomas S. George and June Barrett-McDaniels, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645.

Quantity and Quality of Nuisance Water in the Las Vegas Valley, Steve A. Mizell and Richard H. French, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p128-132.

Remediation of VOCs in Water Using IIV/Cridation.

source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p128-132.

Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p88-103.

Statewide NPS Management Strategies, William Whipple, Jr., Vincent H. Berg and Eric H. Livingston, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p843-848.

Storm-Water Permits: Trickle Becomes Torrent, Jeffrey Beard, CE Nov. 92, p112.

The Total System Solution, David J. Daley and James B. Hinte, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647.

USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, R. Brad Jennings, Tim H. Raines and Lucia G. Colangione, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p56-61.

VOC-Contaminated Water Cleanup Incentive Program, Dan L. Glasgow and Richard A. Rhone, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p214-219.

Waste Water Management at Bulk Terminals, Peter White, (Ports '92) David Torgeth and 1992, p. 14-219.

aste Water Management at Bulk Terminals, Peter White, (Ports '92, David Torseth, ed., 1992), p178-188.

Water pricing
Water Pricing Policy in the United States: Task Committee Report, Task Committee on Water Pricing Policy (Neil S. Grigg, chmn.), (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p636-641.

Water purification

A Systems Approach to Water Recycling Research, Jon Schulz and JoAnn Silverstein, (Engineering Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1996-2007.

Mater quality
Activities of the North Central Texas Council of Governments in Urban Storm Water Planning, John Promise and Samuel W. Brush, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

Aeration at Ohio River Basin Navigation Dams, Steven F. Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens and George H. Taylor, EE Mar./Apr. 90,

p361-375

Agricultural Impacts on Surface Water via Ground Water, William L. Magette, Adel Shirmohammadi, James D. Wood and Theodore H. Ifft, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1922), p407–412.

Application of a Boundary Fitted Coordinate Mass Transport Model, Daniel L. Mendelsohn and J. Craig Swanson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), 232 Add. p382-404.

Application of Three-Dimensional Lagrangian Residual Transport, Mark S. Dortch, Raymond S. Chapman and Steven R. Abt, HY June 92, p831-848.

Applications of Remote Sensing to Hydrology, Sun F. Shih and Edwin T. Engman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540.

Ted Engman, ed., 1992), p535-540.

Assessing Culli Speciation and Transport in the New York Bight, A. B. M. Badruzzaman and Wu-Seng Lung, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p476-488.

Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, George G. Balog, William P. Stack, Kenneth T. Belt and Nathan J. Beil, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503.

cd., 1992), p498-303.

Chemical-Constituent Load Removal Efficiency of an Urban Detention Pond/Wetlands System in the Denver Metropolitan Area, Colorado, James R. Kunkel, Timothy D. Steele, Ben Urbonas and Jay Carlson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p352-357.

Chlorination/Dechlorination and Post Aeration Key Operating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p623-627.

uons, r. rierce Linaweaver, ed., 1992), p623-627.
Circulation Modelling and Water Quality Prediction,
Hans Jacob Vested, Ole Krull Jensen, Ann Christina
Ellegaard, Hanne Karin Bach and Erik Koch
Rasmussen, (Estuarine and Coastad Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed.,
1992), p317-331.

1992), p317-331.
City of San Diego—Study of Potable Reuse of Reclaimed Wastewater: Final Results, Ken Thompson, Adam W. Olivieri, Don Eisenberg, Robert C. Cooper, Richard E. Danielson and Lori Pettigrew, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138.
Clean Waters Taking a Toll on Timber Structures, CE Mar. 92, p28-29.

Mar. 92, p28-29.
A Coastal-Ocean Hindeast/Forecast Model, Ping Chen, Yan-H. Zhang, Kwang-W. You and Lie-Yauw Oey, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p175-187.

Comparison of Optimization Formulations for Waste-Load Allocations, Donald H. Burn and Barbara J. Lence, EE July/Aug. 92, p597-612.

Lence, EE July/Aug. 92, p597-612.
Computation of Long-Term Three-Dimensional Hydrodynamics of New York Bight, Keu W. Kim, David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p500.
Controlling Nitrogen in Coastal Waters, Rosemary Monahan, Susan Beede, Joseph Costa and Bruce Rosinoff, CE Mar. 92, p56-59.

CSO Abatement for Gloucester Harbor in Massachusetts, Jon R. Pearson, Donald J. Chelton and Michael P. Col-lins, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solution, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1240-1241.

and Nani G. Bhowmik, ed., 1992), p1240-1241.

A Decision Support System for Water Quality Modeling, D. S. Yakowitz, L. J. Lane, J. J. Stone, P. Heilman and R. K. Reddy, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p188-193.

Degradation of Ground Water by Tetrachloroethylene, Wendy L. Cohen and Victor J. Izzo, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p53-68.

Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655.

Demand Management Strategies for Providence Water Supply Board, Arun K. Deb, Frank M. Grablutz and Paul Gadoury, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p169-

Design of Pneumatic Diffuser System, Steven C. Wilhelms, Charles W. Downer and Richard E. Price, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1055-1060.

Developments of Modelling Software for Civil Engineers, J. C. M. Dijkzeul, Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p56-60.

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, James D. Bowen, Steven H. Wolf and Curtis A. Meininger, (Ports '92, David Torseth, ed., 1992), p443-455.

Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, Hans J. Peterson and William R. Grout, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p516-522.

Dynamic Fish Growth Modeling for Tailwater Fishery Management, Ming Shiao, Gary Hauser, Gary Chapman, Bruce Yeager, Tom McDonough and Jim Ruane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 136-1141.

Effects of Pre-Oxidation on In-Line Filtration: Particle and Manganese Removal, John E. Tobiason and Nagaraju K. Vinod, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p520-525.

Efficiency of Jet Mixing of Temperature-Stratified Water, Heinz G. Stefan and Ruochuan Gu, EE May/June 92, p363-379.

Efficient Sizing of Storm Water Treatment Ponds, Thon incient Sizing of storm water Treatment Fonds, I and as R. Sear and Brenda van Ravenswaay, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

Electroosmotic Contaminant-Removal Processes, Burton A. Segall and Clifford J. Bruell, EE Jan./Feb. 92, p84-

100

Engineering of Controlled-Drainage Systems, James L. Fouss, James S. Rogers and Cade E. Carter, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p25.

Environmental Engineering Options for Managing Con-taminted Sediment, Norman R. Francingues, Jr. and Daniel E. Averett, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nami G. Bhowmik, ed., 1992), p994-

Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992, 0-87262-878-7, 685pp.

Environmental Impacts of Agricultural Drainage, R. W. Skags, M. A. Breve and J. W. Gilliam, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p19-24.

Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, 0-87262-861-2, 798pp.

Evaluation of Ozone Disinfection Systems: Characteristic Time T, O. Lev and S. Regli, EE Mar./Apr. 92, p268-

Expert System for Agricultural and Water Quality Management, William L. Magette and Adel Shirmohammadi, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p442-447.

643

A GIS Based Synthetic Watershed Sediment Routing Model, Roger H. Smith, Surya N. Sahoo and Larry W. Moore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p200-207.

Global Change and Regional Water Resources, Nathan Buras, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p25-32.

Global Climate Change Effects on Water Quality, G. K. Meyer and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p19-24.

Graphical Post-Processor for CE Ottor, No. 2011.

p19-24.
A Graphical Post-Processor for CE-QUAL-W2, Paul M. Craig, Kenneth C. Black and Robert E. Yager, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajho Cheng, ed. and Craig Swanson, ed., 1992), p61-71.
Groundwater Modeling of Wastewater Management Options, Dominique N. Brocard and Angelos Protopapas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p287-292.
Ground-water Policy-making Support: USEM Optimization Modeling Plus GlS and Graphics, Richard C. Peralta, Christopher M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza, Douglas Ramsey and Kurt Vest, (Prigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p305-310.

1992), p305-310.

Hydraulic Controls on Delaware Estuary Water Quality, Joseph L. DiLorenzo, Georgia R. Marino, Poshu Huang, Tavit O. Najarian and M. Liewellyn Thatcher, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p151-157.

Hydrodynamic and Water Quality Modeling of Lower Green Bay, David J. Mark and Barry W. Bunch, Estraine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p57-668.

Hydrodynamics for Water Quality Models, Mark Dortch and Billy Johnson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p145-150.

Hydrologic Methods for Mitigating and Remediating Wetlands in Industrial Development, W. J. Rabe, Jr. and J. K. Virmani, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p488-

Hydropower, Water Quality and Waste Discharge, Shoou-Yuh Chang, Shu-Liang Liaw, Steven F. Rails-back and Michael J. Sale, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p380-385

p.300-305.

Impact of Breakwater Removal on Hydrodynamics and Water Quality in Flushing Bay, New York, Frederick E. Schuepfer, Guy A. Apicella and Les Kloman, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p694-706.

Impact of Water-Quality Policies on Water Availability, Thomas S. Maddock, El Oct. 90, p333-344.

Improved First Order, Uncertainty, Method, for Water-

Improved First-Order Uncertainty Method for Water-Quality Modeling, Charles S. Melching and Sharath Anmangandla, EE Sept./Oct. 92, p791-805.

Improved Thermal Predictions in CE-QUAL-W2, Raymond S. Chapman and Thomas M. Cole, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p158-163.

Influence of Irrigation on Subsurface Drainage, J. C. Gould and J. C. Guitjens, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p183-188.

Irod Engman, ed., 1992, p.163-168.

Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374.

Integrated Assessment of Acid-Deposition Effects on Lake Acidification, Edward S. Rubin, Mitchell J. Small, Cary N. Bloyd and Max Henrion, EE Jan./Feb. 92, p120-134.
Jefferson Parish Storm Water Management, Marnie Winter and Kent Dussom, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), e457-467.

p45/-461.
nowledge Acquisition for an Expert System for Handling Customer Inquiries on Water Quality, Richard M. Males, Judith A. Coyle, Walter M. Grayman, Robert M. Clark, Harry J. Borchers and Beth G. Hertz, (Knowledge Acquisition in Civil Engineering, Tomasz Arciazewski, ed. and Lewis A. Rossman, ed., 1992),

Articatewski, ed. and Lewis A. Rossman, ed., 1992), p105-123.

Land Use and Imperviousness Information Acquisition, Ming T. Lee, (Hydraulic Engineering: Saving a Threatnend Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p363-368. Liberty Reservoir Stormwater Retrofit Project, George G. Balog, William P. Stack, Kenneth T. Belt and Prakash Mistry, (Environmental Engineering: Saving a Threatnend Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p346-351.

Light-Scatter Particle Counting: Improving Filtered-Water Quality, Carrie M. Lewis and David H. Manz, EE Mar./Apr. 91, p209-223.

Los Angeles-Long Beach Harbors Model Enhancement Program, William C. Seabergh, S. Rao Vemulakonda and James Rossati, Ill., (Ports '92, David Torseth, ed., 1992), p884-897.

Measuring Ozone by Indigo Method: Interference of Sus-

1992), 984-897.

Measuring Ozone by Indigo Method: Interference of Suspended Material, Mary E. Williams and Jeannie L. Darby, EE Nov./Dec. 92, p988-993.

Model for Estimating Tidal Flushing of Small Embayments, Lawrence P. Sanford, William C. Boicourt and Stephen R. Rives, Ww Nov./Dec. 92, p635-654.

Model for Transport of Floating Debris in the Ocean, Y. C. Su, E. R. Holley and G. H. Ward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248.

Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcoll. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p357-369.

p357-369

p337-369.

Modeling Transport and Fate of Micropollutants in Coastal Waters, Tjitte Nauta, Hans van Pagee and Mindert de Vries, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p304-316.

Modified QUAL2E Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, Rex A. Tolman, (Water Resourcer Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p194-199.

Municipal Field Screening Analyses, Gene N. Rattan and John L. McDaniel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p30-55.

55.
NCASI Experiments Related to Validation of Sediment-Water Column Exchange Models for Hydrophobic Chemicals, Steven W. Hinton and Ray C. Whittemore, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p387-389.
Network Applications of the USGS Branch Model, Raymond W. Schaffranck, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1159-1159.

p1159-1164

p1159-1164.

North Central Texas Municipalities Address the NPDES Stormwater Regulations Through Regional Coordination, George E. Oswald, Alan H. Plummer and Robert W. Brashear, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p62-63.

Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, Brad R. Hall and John Nestler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p952.

Numerical Modeling of Withdrawals at Large Dams, Michael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p341-

Jennings, ed. and Nani G. Bhowmik, ed., 1992), p341-346.

Numerical Prediction of Aeration in Hydroturbine Draft Tubes, M. Naghash and C. Bohac, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p293-298.

Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, Zhaodong Lu, Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p418-429.

Numerical Simulation of Tidally Induced Three-Dimensional Hydrodynamics of New York Bight, K. W. Kim, N. W. Scheffner, D. J. Mark and B. H. Johnson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p466-475.

Optimization Model for Alternative Use of Different

Optimization Model for Alternative Use of Different Quality Irrigation Waters, Javaid Afzal, David H. Noble and E. K. Weatherhead, IR Mar./Apr. 92, p218-228.

Overseas Perspectives for Managing Irrigation Drainage in California, Emery M. Roe, IR May/June 91, p350-360

Partitioning Phosphorus Loads: Implications for Lake Restoration, Thomas M. Heidtke and Martin T. Auer, WR Sept./Oct. 92, p562-579.

WK Sept./Oct. 92, p562-579.

PC Modelling System for the Simulation of Transport and Fate of Solutes and Suspended Substances, A. Christina Ellegaard, Jesper Weiergang and Helmer M. Petersen, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p188-201.

p188-201.

PC-Based Integrated Water Quality Impact and Analysis System, J. Craig Swanson, Eoin Howlett and Daniel L. Mendelson, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500.

2000, John B. Pearce, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-43.

Phosphorus Removal by Automatic Backwash Filters at Back River WWTP, George G. Balog, Manu A. Patel, Thomas N. Lash and Christian Davies-Venn, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992, p24-29.

1992), p24-29.

Pilot Study to Meet Drinking Water Regulations, Linda Rae Leong, Patti P. Craddock and Carol Ruth James, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509.

Planning and Designing of a Grit Removal Facility, Robert M. Gruninger, J. David Ross, Manu A. Patel and Burton D. Sklar, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280.

Pierce Linaweaver, ed., 1992, p. 275-280.

Plume Movement and Mixing in Heterogeneous Aquifer,
Salwa Rashad, John Hoopes, Craig Fergusson and
Tswn-Syau Tsay, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p180192

185.
Predicting Fate and Effects of Hydrocarbons in the Oceans, Richard A. Geyer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p356-369.
Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, Kenneth W. Rojas and Donn G. DeCoursey, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p158-163.
Prediction of Sedimentgraph from a Small Watershed in Poland in a Changing Environment, K. Banasik and D. E. Woodward, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p493-498.

Quantity and Quality of Nuisance Water in the Las Vegas Valley, Steve A. Mizell and Richard H. French, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linauewever, ed., 1992), p128-132.

Rehabilitating Trigeston Sustant and LIFFA Water

ed., 1992), p128-132.

Rehabilitating Irrigation Systems with USDA Water Quality Programs, John D. Hedlund, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293.

Removal of 1,2 Dibromo-3-Chloropropane by Counter-current Cascade Air Stripping, N. Nirmalakhandan, Won Jang and Richard E. Speece, EE Mar./Apr. 92, p226-237.

Reservoir Management and Thermal Power Generation.

sonutions, Ted Engman, ed., 1992), p286-293.
Removal of 1.2 Dibromo-3-Chloropropane by Counter-current Cascade Air Stripping, N. Nirmalakhandan, Won Jang and Richard E. Speece, EE Mar/Apr. 92, p226-237.
Reservoir Management and Thermal Power Generation, Barbara J. Lence, M. Imran Latheef and Donald H. Burn, WR July/Aug. 92, p388-405.
Reservoir System Reliability Constrained by Natural Salt Pollution, Ralph A. Wurbs and Awes S. Karama, (Water Resources-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p661-666.
Reservoir Water Quality Modeling in Northern Portugal—Some Case Studies, A. C. Rodrigues and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p804-809.
Retrofitting Storm Water Facilities for Quantity and Quality Control, Stuart G. Walesh, (Water Resources-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p786-791.
A Review of Current UK Techniques for Rehabilitating Water Mains, M. P. Jones, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p76-4-769.
Risk Analysis in Water Resources Engineering. Development and Application, Jacques G. Ganoulis, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakiv, ed., 1992), p1-10.
Rural-Urban Water Transfers in Nevada: Solution or Problem? John W. Fordham, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p492-497.
Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silverston and Mark Easley, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p366-361.
Simulating THM Formation Potential in Sacramento Delta: Part II, Paul H. Hutt

Thermal Discharge Effects on Dissolved Oxygen in an Urban Estuary, Mark Gerath, James Herberich and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604.

The Transport and Fate of Drilling Muds, M. Kathryn Pickens and Wilbert J. Lick, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p202-214.

Use of Contaminant Mobility and Transport Parameters to Determine Water Testing Protocol, Paul D. Robiliard and Perry B. Kubek, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p831-836.

Use of D-C Resistivity to Map Saline Ground Water, Christina L. Stamos, Steven K. Predmore and Adel A. R. Zohdy, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p80-85.

Usefulness of Low-Cost Watershed Monitoring: A Case Study, James G. Turek and David W. Blaha, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p712-717.

Vaning a Dye Study for Defining Diffusion in a Water Quality Model, Richard M. Baker, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p946-951.

Using Simple Models to Evaluate Complex Storm Effects, Paul L. Freedman and John K. Marr, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-89.

Water, Endangered Ecosystem: Assessment of Chemica Pollution, Werner Stumm, EE July/Aug. 92, p466-476.

Water Main Rehabilitation Needs for the 1990's, D. Kelly O'Day, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p760-763.

Water Management as an Instrument for Cooperation and Reconciliation, Charles G. Gunnerson, (Water Re-sources Planning and Management: Saving a Threat-end Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p724-729.

Water Quality and Hydrologic Characteristics of a Wet Detention Pond, Betty Rushton, Water Resource Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p878-883.

Water Quality and Quantity Management in Connected Surface Water Groundwater Systems, Seshadri Suryanarayana and A. Osman Akan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783.

Water Quality Implications of Encapsulated Atrazine, Adel Shirmohammadi, Timothy J. Gish and Raviraj Vyravipillai, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p425-430.

water Quality Modelling: Prediction of the Transport of Water Constituents in the Weser Estuary (Germany, Agmar Müller, Iris Grabemann and Bernhard Kunze, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p405-417.

Water Quantity and Quality for Irrigated Agriculture and Wetlands, E. P. Chambers and J. C. Guitjens, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p431-436.

Water Taste Testers Are Thirsting for Work, CE Jan. 92,

Water-Quality Modeling for Decision Making, G. T. Or-lob, WR May/June 92, p295-307.

Wellfield Protection Program in Broward County, Flori-da, Robert C. Shair, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p69-74.

Water quality control
Computer Support for Water Quality Management in San
Diego Bay, A. E. Bale and G. T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p176-181.
Computer-Aided Support for Water Quality Modeling of the Russian River, John F. DeGeorge and Gerald T. Orlob, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p182-187.
Connecticut's Wellhead Protection Program, Fred S. Banach, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p92-97.
Impact of Water-Quality Policies on Water Availability, Thomas S. Maddock, El Oct. 90, p333-344.
Modeling of CSO Impacts in Jamaica Bay and Tributaries, John P. St. John, William M. Leo and Robert Gaffoglio, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-95.
Oklahoma's Ground Water Protection Strategy, Michael D. Smolen and Patricia E. Norris, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p98-103.
Principles of Ground-Water Protection, David W. Miller, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p86-91.
Statewide NPS Management Strategies, William Whip-

1992), p86-91.

1992), p86-91.
Statewide NPS Management Strategies, William Whipple, Jr., Vincent H. Berg and Eric H. Livingston, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p843-848.
Urban Nonpoint Source Control Strategies Outside North America, Wayne C. Huber, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p61-7622.
Water Program Upgrade Set for Down Under, CE Apr. 92, p21.
Water Quality Management Planning—Bird Pires Wester Pognative Management Planning—Bird Pires Wester Pognative Management Planning—Bird Pires Wester Pognative Management Planning—Bird Pires Wester Quality Management Planning—Bird Pires Wester Pires Pire

92, p.21. Water Quality Management Planning—Bird River Water States, Alan Cavacas, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101. Wellfield Protection Program in Broward County, Florida, Robert C. Shair, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p69-74.

main, ed., 1992, p. 905-14.

Water quality standards
Application for a Mixing Zone Authorization for the
Ocean Discharge of Once-Through Cooling Water in
Puerto Rico, Andrew Dasinger and Donald Galya, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992, p.605-610.
Device Could Bypass Bed Load, Trap Pollutants, CE Aug.
92 n.15.

Device Could Bypass Bed Load, Trap Poliutants, C.E. Aug. 92, p15.

Non-Traditional Water Quality Approaches, Carl P. Houck, Joan Brooks, Ronald D. French and Duane Humble, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438.

Linaweaver, ed., 1992), p433-438.

Water reclamation
City of San Diego—Study of Potable Reuse of Reclaimed
Wastewater: Final Results, Ken Thompson, Adam W.
Olivieri, Don Eisenberg, Robert C. Cooper, Richard E.
Danielson and Lori Pettigrew. (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p133-138.

Funding of Wastewater Reuse Systems Under the Federal
Small Reclamation Projects Act, Robert B. Hamilton,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p702-706.

Groundwater Recovery Program for Southern California,
Andrew Sienkiewich, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p242-247.

Hydrologic Considerations in Mined Land Reclamation,

p. 24-24. Hydrologic Considerations in Mined Land Reclamation, Patrick T. Tyrrell and Martin W. Stearns, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p.383-388.

Keeping the Public in Public Works Facility Planning, Margaret B. Umphres, Flisa Stevenson, Sara M. Katz and Robin Speat, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p238-243.

Nutrient Removal for Two Industrial Recycling Projects, Richard Sykes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p382-387.

Bayesian Inference for Feedback Control. I: Theory, A. J. Clemmens and J. B. Keats, IR May/June 92, p397-415.

Bootstrapping Models Using Existing Databases and Ob-ject Orientation, Rene F. Reitsma and David Sieh, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p598-605.

CE Summitters Offer Views on Problems Troubling to Profession, CE Aug. 92, p66-67.

The Challenge of Kissimmee River Restoration, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p696-701.

Climatic Change and Ensuing Risks Facing Water Resources Managers, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992). p52-66.

Currently Available Expert Systems in Hydroscience, Nosrat Maghsoudi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p355-

Effect of Drought on Urban Water Supplies. I: Drought Analysis, David M. Frick, Dennis Bode and Jose D. Sa-las, HY June 90, p733-753.

Global Change and Regional Water Resources, Nathan Buras, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p25-32.

Giobal Warming and Possible Effects on the Central and Southern Florida Project, James W. Vearil, (Water Re-sources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p13-18.

In Situ Recovery of Water from Dormant Comet Cores & Cl Carbonaceous Chondrites, David L. Kuck, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2367-2381.

Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p1-6.

Loss Accounting Principles With Emphasis on Bridge Failure, Hal Cochrane, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1076-1081.

Modeling Variable Width Buffer Zones with a Geographic Information System, Gary Ostroff, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p213-218.

Multiobjective Analysis of Multireservoir System, S. Mohan and Diwakar M. Raipure, WR July/Aug. 92, p356-370.

Nonparametric Framework for Long-Range Streamflow Forecasting, J. A. Smith, G. N. Day and M. D. Kane, WR Jan./Feb. 92, p82-92.

Numerical Modeling of Withdrawals at Large Dams, Mi-chael L. Schneider, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p341-

Operation of the Central Valley Project During California's Drought, John F. Burke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p348-353.

Overview of AWARE: A Software Tool for Balancing Power and Nonpower Values in Water Resource Plan-ning, Jennie S. Rice, (Risk-Based Decision Making in Water Resources V. Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p108-

Proposed Development of South Central Florida Hydro-logic Ecosystem Model, Stuart J. Appelbaum, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, p707-711.

Reuse Rules, Herman Bouwer, CE July 92, p72-75.

Risk Analysis in Water Resources Engineering: Develop-ment and Application, Jacques G. Ganoulis, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Sta-khiv, ed., 1992), p1-10.

khiv, ed., 1992), p1-10.

Risk Assessment or Engineering Standards: Toward a Decision Framework, Leonard Shabman, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p40-51.

Risk-Based Decision Making in Water Resources V, ISSN: 1063-5076, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, 0-87262-889-X, 395pp.

Session Summary—Plenary Session, Overview of Risk Assessment and Management, Nathan Buras, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p338-342.

Session Summary—Risk and Reliability of Water Resources Infrastructure, Dan Taylor, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p350-354.

Session Summary—Risk Associated With Climate Change, Ronald M. North, (Risk-Based Decision Mak-ing in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p343-345

Simulating THM Formation Potential in Sacramento Delta: Part I, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p513-529.

Simulating THM Formation Potential in the Sacramento Delta: Part II, Paul H. Hutton and Francis I. Chung, WR Sept./Oct. 92, p530-542.

Start-Ups, CE Nov. 92, p10.

Systems Analysis Applications at Hydrologic Engineering Center, Arlen D. Feldman, WR May/June 92, p249-261.

Tapping Shallow Groundwater with Horizontal Wells, Brian J. Boman and Donald R. Justice, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p45-50.

Urban Water Management in the 21st Century, Daniel A. Okun, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p150-160. Water Conference Takes International Focus, CE Nov. 92, p26-27.

Water Quantity and Quality for Irrigated Agriculture and Wetlands, E. P. Chambers and J. C. Guitjens, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p431-436.

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, 0-87262-876-0, 920pp.

Water-Balance Model of Two Conservancies in Guyana J. de Beer and L. Bacchus, IR July/Aug. 92, p513-519. Water's New World, Laura Lang, CE June 92, p48-50.

Water resources develop

Water resources aeveropment
The Drought Occurrence and Response Measures in Taiwan Area, 1991, Hong-Hsi Hsu and Jinn-Chuang Yang,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p977-987.

Environmental Management Issues in Developing Coun-tries of Southeast Asia, Au-Yeung Yin, Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p631-635.

Funding of Wastewater Reuse Systems Under the Federal Small Reclamation Projects Act, Robert B. Hamilton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p702-706.

Optimization Models for Groundwater Development, Robert Willis and Miquel Mariño, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1244.

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Results from a Long-Term Winter Cloud Seeding Program in Utah, Don A. Griffith, John R. Thompson and Dan A. Risch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p559-564.

The Role of Risk Analysis in Feasibility Studies of Water Resources Projects, Alvin S. Goodman, Lampros E. Bourodimos and Albert Machlin, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z, Stakhiv, ed., 1992), p322-330.

p322-330.
Water Availability and Water Demand Study for the Citanduy River Basin, West and Central Java, Indonesia, R. Joseph Bergquist and Ed A. Toms, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p328-331.

Karamouz, eu., 1792.j. p326-351.
Water Management as an Instrument for Cooperation and Reconciliation, Charles G. Gunnerson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p724-729.
Water Resource Systems Models: Their Role in Planning, Daniel P. Loucks, WR May/June 92, p214-223.

Water resources management. The 1991 Revolution in Water Management, George R. Baumli, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p322-327.

An Approach for Incorporating Inflows Uncertainty in Management Models, Luis Vives, Jessis Carrera and Richard N. Palmer, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p84-89

Broward Getting the Most from Its Wastewater, CE Sept. 92, p15,19.

pt., pt.3,19.
 pt. pt.3,19.
 pt. Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, Steve Leitman and Andrew Dzurik. (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412.

p407-412.

City of San Diego—Study of Potable Reuse of Reclaimed Wastewater: Final Results, Ken Thompson, Adam W. Olivieri, Don Eisenberg, Robert C. Cooper, Richard E. Danielson and Lori Pettigrew. (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138.

Computer Modeling Responsibilities for Municipalities, Michael L. Deas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p338-

Conjunctive Optimization Models, Tom Maddock, III. and William W-G. Yeh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p1242.

Coupled Water-Wastewater Management Jesus: Fig. Discounted Water-Wastewater Management Jesus: Fig. Discounter Manag

1724, p14-2.
Coupled Water-Wastewater Management Issues, Kip Duchon and Robert Troxler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p529-531.

The Debate Over Large Dams, Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48.

Decision Support System for Crop Planning during Droughts, H. Raman, S. Mohan and N. C. V. Ranga-charya, IR Mar./Apr. 92, p229-241.

Demand Management Strategies for Providence Water Supply Board, Arun K. Deb, Frank M. Grablutz and Paul Gadoury, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p169-

Evaluation of the Model Water Code from an Environ-mental Ethic Perspective, Margot W. Garcia, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1922, p231-236.

Four Divisions Gather at Water Forum, CE Oct. 92, p20,22

p20,22.
Ground Water Management in Arkansas, Jonathan Ray Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p110-115.
Habitat Simulation in United States, Britain, and France, Robert T. Milhous, Ian Johnson, Yves Souchon and Sylvie Valentin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p362-367.

Hydropower, Water Quality and Waste Discharge, Shoou-Yuh Chang, Shu-Liang Liaw, Steven F. Rails-back and Michael J. Sale, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

p380-385

p380-385.

Identifying the Critical Path and Building Coalitions for Restoring Degraded Areas of the Great Lakes, J. H. Hartig, D. P. Dodge, L. Lovett-Doust and K. Fuller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, p823-830.

Improved First-Order Uncertainty Method for Water Anamagandia, EE Sept./Oct. 92, p791-805.

Improved First-Order Uncertainty Method for Water Anamagandia, EE Sept./Oct. 92, p791-805.

In Standard Modeling, Charles S. Melching and Sharath Anamagandia, EE Sept./Oct. 92, p791-805.

In Standard Modeling, Charles S. Melching and Sharath Anamagament in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, p1-6.

source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p1-6.
Information Management in Water Resources: Database and GIS Integration, Paul A. Weghorst, Ali Diba, Darrell Dyke and D. Burnell Cavender, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374.
Information Theory and Multi-Objective Evaluation, Jay R. Lund and Morris Israel, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p486-491.

p486-491

Seutre of Southanks, Monammad Ratamouz, ed., 1992), p486-491.

An Interagency Program to Improve Irrigated Agriculture, A. R. Dedrick, W. Clyma, A. J. Clemmens, R. D. Gibson, J. A. Replogie, R. E. Ware, P. N. Wilson and D. B. Levine, Urrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600.

Interfacing with the Public on Water-Related Issues—What TVA is Doing, Janet C. Herrin and Arland W. Whitlock, (Water Resource Flanning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p593-298.

Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992, 0-87262-877-9, 634pp.

Knowledge Representation in Water Resource Management Using Prolog and Natural Language, Richard N. Palmer and Lynn Spence, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p144-160.

Lunacy, Legerdemain or Levitation: Legal Assessment of

Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230.

Karamouz, ed., 1992), p225-230.

Managing Existing Reservoirs to Meet New Challenges, Morris Israel and Jay R. Lund, (Water Resources Planning and Management: Saving a Threatened Resource-in Search of Solutions, Mohammad Karamouz, ed., 1992), p673-678.

Managing Lower Colorado River, Daniel P. Sheer, Timothy J. Ulrich and Mark H. Houck, WR May/June 92, p324-336.

p324-330. Managing Water Supply with Aquifer Storage and Recovery. Thomas J. Buchanan and Margaret A. Ibison, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p426-431.

Multilayered, Priority-Based Simulation of Conjunctive Facilities, Flizabeth S. Andrews, Francis I. Chung and Jay R. Lund, WR Jan/Feb, 92, p32-53.

Operation of the Tennessee Valley Authority Water Control System Under Extreme Drought Conditions, H. Morgan Goranlo, Jr., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-365.

Overview of AWARE: A Software Tool for Balancing

Overview of AWARE: A Software Tool for Balancing Power and Nonpower Values in Water Resource Plan-ning, Jennie S. Rice, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p108-

Partitioning Phosphorus Loads: Implications for Lake Restoration, Thomas M. Heidtke and Martin T. Auer, WR Sept./Oct. 92, p562-579.

Planning and Management of Water-Resource Systems in Developing Countries, M. Miloradov, WR Nov./Dec. 92, p603-619.

Quantity and Quality of Nuisance Water in the Las Vegas Valley, Steve A. Mizell and Richard H. French, Envi-ronmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed. 1992), p128-132.

Rainfall Intensity-Duration-Frequency Formula for India, Umesh C. Kothyari and Ramchandra J. Garde, HY Feb. 92, p323-336.
Rationalizing Water Requirements with Aid of Fuzzy Allocation Model, Janusz Kindler, WR May/June 92, 2308 232.

p308-323. Research/Application of System Engineering to Water Resources Systems, Dingzhong Dai, Xueren Lu, Yuan-yu Guo and Xinyi Xu, WR May/June 92, p337-349. Results from a Long-Term Winter Cloud Seeding Program in Utah, Don A. Griffith, John R. Thompson and Dan A. Risch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p559-564.
Reuse Rules. Herman Bouwer. CE July 92, p72-75.

Ruse Rules, Herman Bouwer, CE July 92, p72-75.
Risk-Based Decision Making in Water Resources V.
ISSN: 1063-5076, Yacov Y. Haimes, ed., David A.
Moser, ed. and Eugene Z. Stakhiv, ed., 1992.
0-87262-899-X, 395pp.

0-87262-899-X, 395pp.

Seven Legal Strategies to Cool Global Warming, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p33-38.

Simulating the Effects of Deficit Irrigation for Furrow Systems, J. M. Enciso, D. L. Martin, D. E. Eisenhauer and N. L. Klocke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p244-249.

Solving MWRA's Supply Issues Through Conservation, Marcis Kempe, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p163-168.

168

Start-Ups, CE Aug. 92, p8.

Study of Groundwater Availability in Case of Drought, Tiao J. Chang and Choo B. Teoh, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p130-137.

Surface and Subsurface Drainage of Metropolitan City in Arid Zone, Achi M. Ishaq, IR Jan./Feb. 92, p19-35.

Arid Zone, Achi M. Ishaq, IR Jan./Feb. 92, p19-35.
Targeting of Agl in a Utah Winter Orographic Storm, James A. Heimbach, Jr. and Arin B. Super, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p53-558.
Technology Transfer Lessons from a U.S. Water District, Douglas Welch and Karen McLaughlin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p203-208.
The U.S. Bureau of Reclamation—New Directions in Water Management and Conservation, Allen R. Powers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p232-227.

Use of Interactive Simulation Environments for Evalua-tion of Water Supply Reliability, Larry M. Karpack and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Michammad Karamouz, ed., 1921),

Use of Interactive Simulation Environments for the Development of Negotiation Tools, Allison M. Keyes and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p68-73.

poo-13.
Water Demand Management in the Las Vegas Valley Region, Timothy D. Feather and Nick Braybrooke, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p44-49.
Water Management: Challenge and Opportunity, Warren Viessman, Jr., WR Mar./Apr. 90, p155-169.

water Management: Challenge and Opportunity, Warren Viessman, Jr., WR Mar/Apr. 90, p155-169.

Water Management Under Drought Conditions: An Overview of Practices by Non-Federal Entities, Darrell G. Fontane and Donald Frevert, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p354-359.

Water Management Under Drought Conditions an Overview of Practices by Federal Agencies, Donald K. Frevert and Darrell G. Fontane, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p601-605.

Water Planning Using an Expert GIS, Daene C. McKinney, David R. Maidment and Mustafa Tanriverdi, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p219-224.

Water Resources Stems Models: Their Role in Planning, Daniel P. Loucks, WR May/June 92, p214-223.

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, 0-87262-876-0, 920pp.

Water Use in Saudi Arabia: Problems and Policy Implica-tions, Abdulla Ali Al-Ibrahim, WR May/June 90, p375-388.

Watershed Models for Resources Management Decisions, Alan M. Lumb, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p884-889.

What Should the ASCE Model Water Code Committee Do? Leonard Snabman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p237-241.

## Water reu

p237-241.

Water reuse

Alternative Methods of Drainage Management in San Joaquin Valley, California, S. Alireza Taghavi and Ben Everett, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337.

City of San Diego—Study of Potable Reuse of Reclaimed Wastewater: Final Results, Ken Thompson, Adam W. Olivieri, Don Eisenberg, Robert C. Cooper, Richard E. Danielson and Lori Pettigrew, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138.

Groundwater Recharge as a Reclaimed Water Transport Mechanism, Thomas G. Richardson and Nereus L. Richardson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p61-66.

Non-Traditional Water Quality Approaches, Carl P. Houck, Joan Brooks, Ronald D. French and Duane Humble, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438.

Recovery of Metals from Water Using Ion Exchange, Thomas A. Hickey and David K. Stevens, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515.

Reuse Simulation in Irrigated River Basin, L. K. Smede-

Reuse Rules, Herman Bouwer, CE July 92, p72-75.
Reuse Simulation in Irrigated River Basin, L. K. Smedema, W. Wolters and P. J. Hoogenboom, IR Nov/Dec. 92, p841-851.

pea1-831.
 Surface and Subsurface Drainage of Metropolitan City in Arid Zone, Achi M. Ishaq, IR Jan./Feb. 92, p19-35.
 A Systems Approach to Water Recycling Research, Jon Schulz and JoAnn Silverstein, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1996-2007.

Water Quality Effects on Eucalyptus ET, Allen Dong, Kenneth Tanji, Steve Grattan, Fawzi Karajeh and Marc Parlange, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p164-170.

Water rights

Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230.

Karamouz, ed., 1992), pt2-230. Scheduling of Ground Water Pumpage in Alluvial Aquifers to Minimize the Impact on Surface Water Diversions, John C. Tracy and Munjed Al-Sharif, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p79-83.

Karamouz, ed., 1992), p79-83.
System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Ralph A. Wurbs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p498-503.
Water Reuse to Gain Water Rights for Hays, Kansas, H. Wayne Gresh and Jeffrey W. Henson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p55-60.

Water Service Area Systems Analysis, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, (Hydraulic Engineering: So-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592.

Water shortage

Water Supply Operations During Drought, Jhih-Shyang Shih and Charles ReVelle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p310-315.

Model Study of Jet-Circulated Grit Chamber, Asher Brenner and Mordechai H. Diskin, EE Nov./Dec. 91, p782-787.

## Water storage

Conjunctive Use—Advantages, Constraints, and Examples, Jack J. Coe, IR May/June 90, p427-443.

pies, Jack J. Oce, ik May/June 90, ps2/-443.

Design and Maintenance of Rural Water Supply Systems for Improved Performance, Paul D. Robillard and Ronald L. Droste, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), ps23-528.

Expert System for Operating A Treated Water Supply System, Kent Kequang Mao, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p867-871.

Global Change and Regional Water Resources, Nathan Buras, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p25-32.

Mohammad Karamouz, ed., 1992), p25-32.
Identification of Control System for Canal with Night Storage, Wytze Schuurmans, Robert Brouwer and Peter Wonink, IR May/June 92, p360-369.
Managing Water Supply with Aquifer Storage and Recovery, Thomas J. Buchanan and Margaret A. Ibison, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p426-431.

Adequacy of Surface Water-Supply Systems: Case Study, Krishan P. Singh, Sally M. Broeren and Ali Dur-gunoğlu, WR Nov/Dec. 92, p620-635.

Agricultural Option Contracts, John F. Scott, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p138-143.

Assessing the Reliability of the Water Supply to a Closed Basin Wetlands, John C. Tracy and James K. Koelliker, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992, p.445–451.

Assessment of Impacts Associated with Alternate Cooling System Designs for an Electric Power Station, Steven H. Wolf, James D. Bowen, Donald P. Galya and Frank S. Smith, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231.

BRASS Modeling of Lofza Reservoir, Puerto Rico, for Sediment Management Operations, Gregory L. Morris, Raul Colón, Robert Laura and G. T. Anderson, (Water Resources Planning and Management: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p837-842.

Building a Pipeline-Not a "Flow Through" Process, Roddy Rogers, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p591-

Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, John L. Merriam, (Water Resources Planning and Management: Saving a Threat-end Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992, p623-630.

Chlorination/Dechlorination and Post Aeration Key Operating Parameters, Neil A. Berman, Manu A. Patel and Jack P. McClinton, Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p623-627.

Cloud Seeding: The Engineering is Done, but What About Social Impacts? Maurice Roos, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p565-570.

Computer Modeling Responsibilities for Municipalities, Michael L. Deas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p338-343.

Conjunctive Use—Advantages, Constraints, a ples, Jack J. Coe, IR May/June 90, p427-443.

Coupled Water-Wastewater Management Issues, Kip Du-chon and Robert Troxler, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p529-531.

Critical Public Issues for Well Head Protection, Daniel J. Van Abs, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p274-279.

Demand Management Strategies for Providence Water Supply Board, Arun K. Deb, Frank M. Grablutz and Paul Gadoury, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p169-

The Desalination Situation, John Prendergast, CE Aug. 92, p42-44.

Design and Maintenance of Rural Water Supply Systems for Improved Performance, Paul D. Robillard and Ronald L. Droste, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p523-528.

p323-326.
Development of a Water Conservation Program for the Spring Valley Water Company, Frank Gradilone, III., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p734-759.

Effect of Drought on Urban Water Supplies. I: Drought Analysis, David M. Frick, Dennis Bode and Jose D. Sa-las, HY June 90, p733-753.

sas, 111 June 20, p.733-753.

Feasibility of Water Supply for City of Houston Subsidence Zones Five and Six, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p480-485.

Statistical, ed., 172-5, pre-153.
Funding of Wastewater Reuse Systems Under the Federal
Small Reclamation Projects Act, Robert B. Hamilton,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p702-706.

Ground Water Management in Arkansas, Jonathan Ray Sweeney and A. Mark Bennett, III, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p110-115.

Groundwater Management in Southern Florida, Mark M. Wilsnack, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p104-109.

650

ed., 1992), p104-109.
Groundwater Modeling of Wastewater Management Options, Dominique N. Brocard and Angelos Protopapas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p287-292.
Groundwater Recharge as a Reclaimed Water Transport Mechanism, Thomas G. Richardson and Nereus L. Richardson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p61-66.
Groundwater Recovery Program for Southern California, Andrew Sienkiewich, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p242-247.
Hydraulic Engineering: Saving a Threatened Resource—

p/42-24/.

Hydraulic Engineering: Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.

Impact of Water-Quality Policies on Water Availability,
Thomas S. Maddock, El Oct. 90, p333-344.

As Legoustic Institutional Arrangement Which Incorpo-

Impact of Water-Quality Policies on Water Availability, Thomas S. Maddock, El Oct. 90, p333-344.

An Innovative Institutional Arrangement Which Incorporates the Risk Preferences of Water Users, Norman J. Dudley, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiy, ed., 1992), p174-199.

Lifeline Earthquake Engineering in the Central and Eastern U.S. Technical Council on Lifeline Earthquake Engineering in the Central and Eastern U.S. Technical Council on Lifeline Earthquake Engineering Monograph No. 5, Donald B. Ballantyne, ed., 1992, 0-27262-902-3, 200pp.

Managing Water Supply with Aquifer Storage and Recovery, Thomas J. Buchanan and Management: Saving a Threatened Resources—In Search of Solutions, Mohammad Karamouz, ed., 1992, p245-431.

Modeling Variable Width Buffer Zones with a Geographic Information System, Gary Ostroff, (Water Resources Planning and Management: Saving a Threatened Resources—In Search of Solutions, Mohammad Karamouz, ed., 1992), p213-218.

Nonparametric Framework for Long-Range Streamflow Forecasting, J. A. Smith, G. N. Day and M. D. Kane, WR Jan./Feb. 92, p82-92.

Planning Water Supply and Sanitation Projects in Developing Countries, Suley A. Muyibi, WR July/Aug. 92, p351-355.

Reclaimed Water, Irrigation, and Conservation Pricing, Ronald E. Young (Water Resources)

Reclaimed Water, Irrigation, and Conservation Pricing, Ronald E. Young, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

p161-162.

Removal of Extremely Low Levels of Munitions in a Drinking Water Supply, R. Mark Bricka and Wayne Sharp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p1190-1196.

The Role of Risk Analysis in Feasibility Studies of Water Resources Projects, Alvin S. Goodman, Lampros E. Bourodimos and Albert Machlin, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p322-330.

p322-330.

Rural-Urban Water Transfers in Nevada: Solution or Problem? John W. Fordham, (Water Resources Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), p492-497.

Simulating the Effects of Deficit Irrigation for Furrow Systems, J. M. Enciso, D. L. Martin, D. E. Eisenhauer and N. L. Klocke, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p244-249.

Softening by Fluidized Bed Crystallizers, Willard D. Harms, Jr. and R. Bruce Robinson, EE July/Aug, 92, p513-529.

Harms, Jr. and R. Bruce post.
p513-529.
Solving MWRA's Supply Issues Through Conservation,
Marcis Kempe, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p163Solutions, Mohammad Karamouz, ed., 1992), p163-

Stability Evaluations for Old Water Supply Dams in Pennsylvania, James V. Hamel, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1050-1065.

Start-Ups, CE Dec. 92, p.8.

Tapping Shallow Groundwater with Horizontal Wells, Brian J. Boman and Donald R. Justice, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p45-50.

Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, D. W. Ming, D. C. Golden and D. L. Henninger, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1709-1719.

pl 109-1119.

alter Management as an Instrument for Cooperation and Reconciliation, Charles G. Gunnerson, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p724-729.

Water Supply Operations During Drought, Jhih-Shyang Shih and Charles ReVelle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p310-315.

Wellfield Protection Program in Broward County, Florida, Robert C. Shair, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p69-74.

Water supply forecasting Improved Techniques in Regression-Based Streamflow Volume Forecasting, David C. Garen, WR Nov./Dec.

92, p654-670.

Stochastic Simulation of Climate Input for Water Supply Forecasting, Roy W. Koch, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 957-562.

1992), p557-562.

Water supply systems
Adequacy of Surface Water-Supply Systems: Case Study,
Krishan P. Singh, Sally M. Broeren and Ali Durgunoğiu, WR Nov./Dec. 92, p620-635.

Army Water Supply Management System for Installations Drinking Water Facilities, Hany H. Zaghloul,
Fadi A. Karaa, Jocelyn Clark and Matthew Korfist,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p145-152.

Basic Planning and Design of a Water Utility Information
System, Chun-Hou Orr, Bryan Coulbeck, Sergio T.
Coelho and Helena Alegre, [Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p340-345.
Cost of Rehabilitation of Water Distribution Systems,
Peter K. Mac Ewen, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p770-771.

Eapert System for Operating A Treated Water Supply

p770-771.

Expert System for Operating A Treated Water Supply System, Kent Keqiang Mao, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p867-871.

Impact on Water Supply of a Seismically Damaged Water Delivery System, M. Shinozuka, H. Hwang and M. Murata, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p43-57.

p43-57.

In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, Mitchell L. Harris and David M. Dumas, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p334-339.

Integration of AM/FM/GIS with MODELING/DESIGN on Large Utility PC Network, J. Darrell Bakken and Charline M. Avey, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p703-711.

Modeling Instantaneous Residential Demand: in March March

Modeling Instantaneous Residential Demands in Munici-pal Water Distribution Systems, Brian D. Barkdoll and Steven G. Buchberger, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p62-67.

p62-67.
Modeling of a Large-Scale Water Distribution System, Nien-Sheng Hsu, Peter W. F. Louie and William W-G. Yeh, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p598-603.

New York Water-Tunnel Section Finished After 22 Years, CE Sept. 92, p12. Numerical Method for Finding Leaks in Pipe Networks, Ranko S. Pudar, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nami G. Bhowmik, ed., 1992), p809-

815.
On-Line Optimal Control of Urban Water Supply, Otto J. Helweg, Shahram Pezeshk and Kenneth E. Oliver, (Water Resources Panning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamous, ed., 1992), p532-536.
Optimal Locations of Monitoring Stations in Water Distribution System, Byoung Ho Lee and Rolf A. Deininger, EE Jan./Feb. 92, p4-16.
Optimal Pump Scheduling in Water-Supply Networks, Paul W. Jowitt and George Germanopoulos, WR July/Aug, 92, p406-422.
Optimization-Availability-Based Design of Water-Optimization-Availability-Based Design of Water-

raut W. Jowitt and George Germanopoulos, WR July/
Aug. 92, p406-422.
Optimization-Availability-Based Design of WaterDistribution Networks, M. John Cullinane, Kevin E.
Lansey and Larry W. Mays, HY Mar. 92, p420-441.
Planning and Operation of a Multi-Reservoir Water Distribution System, Ali Diba, Peter W. F. Louie,
Manouchehr Mahjoub and William W-G. Yeh, (Water
Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p316-321.
Predicting Water Demand in Agricultural Regions Using
Time Series Forceasts of Reference Crop Evapotranspiration, John C. Tracy, Miguel A. Mariño and S. Alireza
Taghavi, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p50-55.
A Review of Current UK Techniques for Rehabilitating
Water Mains, M. P. Jones, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
p764-769.
Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka

Seattle Plays It Safe, Walter F. Anton, Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p38-40. Turning on the Waterworks, Donald E. Eckmann, CE Aug. 92, p48-51. Use of Contaminant Mobility and Transport Parameters

to Determine Water Testing Protocol, Paul D. Robil-lard and Perry B. Kubek, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992),

po.31-850. se of Interactive Simulation Environments for Evalua-tion of Water Supply Reliability, Larry M. Karpack and Richard N. Palmer, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.144-149.

ptl44-149.
Water Main Rehabilitation Needs for the 1990's, D. Kelly O'Day, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p760-763.
Water Main Rehabilitation Using Silicote Lining, Steven E. Cooper and Gregory C. Heitzman, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p772-773.
Water Planning Using an Expert GIS, Daene C. McKinney, David R. Maidment and Mustafa Tanriverdi, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p219-224.

mad Karamouz, ed., 1992), p219-224.
Water surface
Discharge Capacity for Curb-Opening Inlets, Ali Uyumaz, HY July 92, p1048-1051.
Gas Transfer in Diffused Bubble Plumes, Steven C. Wilhelms and Sandra K. Martin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p317-322.
HEC-2 Shells and Tools, Cheryl Johnson, CC Apr. 92, p14-14.
Side Weir in Triangular Channel, Ali Uyumaz, IR Nov/Dec. 92, p965-970.

Water surface profiles
BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906-911.

Design Procedure for Flow Over Side Weirs, Ali Uyumaz and Roger H. Smith, IR Jan./Feb. 91, p79-90.

HEC-2 Water Surface Profiles Program, Vernon Bonner, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p866-871.

Open-Channel Flow Algorithm in Newton-Raphson Form, John N. Paine, IR Mar/Apr. 92, p306-319.

SCS Water Surface Profile Model—WSP2, William H. Merkel and Donald E. Woodward, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1932), p839-864.

Steady and Unsteady Flow Profiles in Reclamation, Cur-

Steady and Unsteady Flow Profiles in Reclamation, Curtis J. Orvis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p872-877.

Perification of a 3-D Hydrodynamic Numerical Model, David Daniel Abraham, (Hydradynamic Numerical Model, David Daniel Abraham, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p225-230.

1992), p2c3-230.
WSPRO, A Model for Water-Surface PROfile Computa-tions, James O. Shearman, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p865.

Analytical Prediction of Gasoline Thickness on the Water Table, M. Yavuz Corapcioglu, Rajasekhar Lingam and Vern K. Haisler, (Water Resources Planning and Management: Saving a Theatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p254-256. 259

Despite Study, Questions Surround Yucca Mountain, CE July 92, p14,16.

Drawdown Solutions with Variable Drainable Porosity, Ravi S. Pandey, Ashim K. Bhattacharya, Om P. Singh and Suresh K. Gupta, IR May/June 92, p382-396.

ET from Shallow Groundwater Maintained by Controlled-Drainage/Subirigation System, James L. Fouss and James S. Rogers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p594.

Engman, ed., 1992), p594.

The Impact of Thermal Loading on Repository Performance at Yucca Mountain, Thomas A. Buscheck and John J. Nitao, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), p1003-1017.

Including Uncertainty of Hydraulic Conductivity into Drainage Design, J. Gallichand, D. Marcotte and S. O. Prasher, IR Sept./Oct. 92, p744-756.

Manholes and Microtunneling, Evarett Cruz, Jr., CE Dec. 92, p52-55.

Paleohydrologic Implications of the Stable Isotopic Com-position of Secondary Calcite Within the Tertiary Volposition of secondary Calcule within the Territary va-canic Rocks of Yucca Mountain, Nevada, Joseph F. Whelan and John S. Stuckless, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581.

Management Program Committee, 1992), p1572-1581. Potential Flow Solution for Ground Water Mounding, Tswn-Syau Tsay, John Hoopes, Craig Fergusson and Salwa Rashad, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p790. Radioelements and Their Occurrence with Secondary Minerals in Heated and Unheated Tuff at the Nevada Test Site, S. Flexser and H. A. Wollenberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1593-1593.

Relating Crop-Yield Response to Water-Table Fluctua-tions, H. M. Kandil and L. S. Willardson, IR Jan./Feb. 92, p113-121.

Simulated Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p177-182.

Tapping Shallow Groundwater with Horizontal Wells, Brian J. Boman and Donald R. Justice, (Irrigation and Donald R. Justice, (Irrigation and Donalor, Saurice, Saurice), Preadered Resource—In Search of Solutions, Ted Engman, ed., 1992), p45-50.

Trends in Phreatic Surface Motion in Rubble-Mound Breakwaters, Kevin R. Hall, WW Mar/Apr. 91, p179-

Unsteady Drawdown of Water Table, M. Emin Savci, IR July/Aug. 90, p508-526.

Water temperature
Physical and 2-D Computer Models of Skimmer Curtain
Effects on Lewiston Reservoir and Outlet Temperatures, Russ T. Brown, Gus Yates and Perry Johnson,
(Hydraulic Engineering: Saving a Treatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p507-513.

Calculation of Total Conveyance in Natural Channels, J. Garbrecht and G. O. Brown, HY June 91, p788-798.

Garbrecht and G. O. Brown, HY June 91, p788-798.

Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, Ray Jay Davis, (Water Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230.

Rural-Urban Water Transfers in Nevada: Solution or Problem? John W. Fordham, (Water Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p492-497.

Water Pricing Policy in the United States: Task Committee Report, Task Committee on Water Pricing Policy (Neil S. Grigg, chmn.), (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p492-497.

Water Pricing Policy in the United States: Task Committee Report, Task Committee on Water Pricing Policy (Neil S. Grigg, chmn.), (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p636-641.

Water transportation

Water transportation Securing Strategic National Security Objectives Through Maritime Activities, S. G. Phernambucq and T. H. Wakeman, (Ports '92, David Torseth, ed., 1992), p316-321.

321.
Technology Transfer Lessons from a U.S. Water District,
Douglas Welch and Karen McLaughlin, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p203-208.
The Thermal Analysis of BR-100: A Barge/Rail Nuclear
Spent Fuel Transportation Container, A. B. Copsey,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p1848-1854.
Two-Dimensional Leschate Estimation through Land.

mittee, 1992), p1848-1854.
Two-Dimensional Leachate Estimation through Landfills, Shabbir Ahmed, Reza M. Khanbilvardi, John Fillos and Phillip J. Gleason, HY Feb. 92, p306-322.
We Need to Integrate Water Transportation and Environmental Protection Planning and Policy, Walter A. Lyon, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p403-406.

Mohammad Karamouz, ed., 1992), p403-406.

Water treatment
Analysis of Soil-Air Permeability and Saturated Hydraulic Conductivity for Remedial System Design, Hamid
G. Bojd and B. V. Nanjundeswar, (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p321-326.

Application of Optimal Hydraulic Control to Groundwater Remediation, David Ahlfeld and Manoutch
Heidari, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p1243.

Atrazine Biodegradation in Biological GAC Columns, M.
K. Banks and C. M. Huang, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p516-519.

Brackish Groundwater Desalting in Southern California:
A Summary of Case Studies, Lee A. Jacobi, Julius Y.
Ma and William R. Everest, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p587-592.

Chemical Dosing of Small Water Utilities Using Regression Analysis, Glenn W. Ellis, Anthony G. Collins, Xi
Ge and Catherine R. Ford, EE May/June 91, p308-319.

Determining Causes for Taste and Odor in Bandar Abbas's Drinking Water, Mahmoud Asadi and A. R. Mesdaghinia, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p610-616.

Determining Velocity Gradient in a Flocculation
Basin—A Case Study, Christopher H. Yu., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p610-616.

Determining Velocity Gradient in a Flocculation
Basin—A Case Study, Christopher H. Yu., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p610-616.

Determining Velocity Gradient in a Flocculation
Basin—A Case Study, Christopher H. Yu., (Environmental Engineering: Saving a Threatened Resource—In Sea

ystem Cleanup, Chien D. Ngo, Philip J. Mitchell, T. Su and Gary M. Carlton, CE Aug. 92, p45-47.

Effect of Collector Dosage on Metal Removal by Precipitation/Flotation, Venbakm C. Gopalratnam, Gary F. Bennett and Robert W. Peters, EE Nov./Dec. 92, p923-948.

Bennett and Robert W. Peters, EE Nov/Dec. 92, p923-948.
The Effects of Land Applied Water Treatment Residuals on Soil Phosphorus, James R. De Wolfe and Brian A. Dempsey, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p297-302.

Effects of Pre-Oxidation on In-Line Filtration: Particle and Manganese Removal, John E. Tobiason and Nagaraju K. Vinod, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p520-525.

Efficient Sizing of Storm Water Treatment Ponds, Thomas R. Sear and Brenda van Ravenswasy, (Water Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p780-785.

Engineering Behavior of Water Treatment Sludge, M. C. Wang, J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov./Dec. 92, p848-864.

Evaluation of BAT for VOCs in Drinking Water, Robert M. Clark and Jeffrey Q. Adams, EE Mar./Apr. 91, p247-268.

Evaluation of Cowsking and Treatment System at the Chieman Cowsking and Treatment System at the

p247-268. Evaluation of Dewatering and Treatment System at the Chisman Creek Superfund Site, Precha Yodnane, Dennis W. Okorn and Burton M. Marshall, (Environmental Engineering: Saving a Threatmed Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p250-255.

Evaluation of Ozone Disinfection Systems: Characteristic Time T, O. Lev and S. Regli, EE Mar/Apr. 92, p268-285.

Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.

Evaluation of Ozone Disintection Systems: Characteristic Concentration C, O. Lev and S. Regli, EE July/Aug. 92, p477-494.

Expert System for Operating A Treated Water Supply System, Kent Keqiang Mao, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p867-871.

From Design to Remediation: The Vroom Site, Diane A. Gow and Mark S. Mihm, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, Pierce Linaweaver, ed., 1992), p309-314.

Funding of Wastewater Reuse Systems Under the Federal Small Reclamation Projects Act, Robert B. Hamilton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p702-706.

Lessons Learned—Milwaukee Water Pollution Abatement Program, Gary D. Beech, Me Apr. 92, p186-191.

Light-Scatter Particle Counting: Improving Filtered-Water Quality, Carrie M. Lewis and David H. Manz, EE Mar./Apr. 91, p209-223.

Multi-Stage Diffused Bubble Aeration System for the Removal of Volatile Organics and Radon, a Case History, A. David Marino and Jerry Lowry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p534-536.

Oxidation of Bromide by Hypochlorous Acid in Aqueous Solutions: Stoichiometry and Kinetics, N. Phillip and V. Diyamandoglu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p534-539.

Pioto Study to Meet Drinking Water Regulations, Linda Rae Leong, Patt P. Craddock and Carol Ruth James, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509.

Radiation Energy Treatment of Water, Wastewater and Sludge: A State-of-the-Art Report, Task Committee on Patertion Engery.

source—In Search of Source, Prefete Ethawaver, ed., 1992), p504-509.

Radiation Energy Treatment of Water, Wastewater and Sludge: A State-of-the-Art Report, Task Committee on Radiation Energy Treatment, Air and Radiation Management Committee, Environmental Engineering Division, (Paul Kruger, chmn.), 1992, 0-87262-901-5, 52pp. Recovery of Metals from Water Using Ion Exchange, Thomas A. Hickey and David K. Stevens, (Environmental Engineering Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515.

Reduced Recharge Capacity of a Pump and Treat System, Cynthia L. Teeter, Douglas Gunnison, Norman R. Francingues, Jr. and Mark E. Zappi, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1197-1203.

Remediation of VOCs in Water Using UV/Oxidation, Rayomand R. Bhumgara, Chen-yu Yen, D. Randolph Grubbs and Keith Bircher, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p98-103.

Removal of Extremely Low Levels of Munitions in a Drinking Water Supply, R. Mark Bricka and Wayne Sharp, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1190-1196.

Removal of VOCs and TEL in Iron-Rich Groundwaters.

ed. and Nani G. Bhowmik, ed., 1992, p1190-1190. Removal of VOCs and TEL in Iron-Rich Groundwaters, James E. Rumbo, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p116-121. Softening by Fluidized Bed Crystallizers, Willard D. Harms, Jr. and R. Bruce Robinson, EE July/Aug. 92,

A Systems Approach to Water Recycling Research, Jon Schulz and JoAnn Silverstein, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1996-2007.

p1990-2007.

TOC Removal by Coagulation and Softening, S. R. Qasim, S. A. Hasham and N. I. Ansari, EE May/June 92, p432-437.

Treatability Study of Granular and Biological Activated Carbon for Groundwater Containing Fenac, a Herbicide, Chen-yu Yen and Rong-Jin Leu, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p104-109.

109.
Use of Groundwater Models to Simulate Remediation, Louis H. Motz, Paul A. Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Randall W. Watts, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-

VOC-Contaminated Water Cleanup Incentive Program, Dan L. Glasgow and Richard A. Rhone, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p214-219.

Water Quality and Hydrologic Characteristics of a Wet Detention Pond, Betty Rushton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p878-883.

Water treatment, chemical

emoval of Trihalomethane Precursors by Ferric Chloride Coagulation, Anne Studstill and Appiah Amirtharajah, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p526-531.

Water treatment plants

Water treatment plants
Army Water Supply Management System for Installations Drinking Water Facilities, Hany H. Zaghloul, Fadi A. Karaa, Jocelyn Clark and Matthew Korfist, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p143-152.

The Caisson Solution, Bennie L. Benjamin, Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47.

Design of Municipal Wastewater Treatment Plants, 2 vols (M&R No. 76), Joint Task Force of the American Society of Civil Engineers and the Water Environment Federation, (Joseph F. Lagnese, chmn.), 1991, 0-87262-834-5, 1632pp.

834-5, 1632pp.

A Diagnostic Aid for Wastewater Treatment Plants, Catherine D. Perman and Leonard Ortolano, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p86-104.

Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, Catherine D. Perman and Leonard Ortolano, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p176-213.

Start-Ups, CE Apr. 92, p10.

Start-Ups, CE Oct. 92, p8.

Wanaque Filtration Plant Suberade Stabilization.

Wanaque Filtration Plant Subgrade Stabilization—A Case History, Joseph D. Chastanet and Paul M. Blaki-ta, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p265-274.

Broad-Crested Weir Application on 15,000-Acre Farm, S. W. Styles, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p300-304.

ed., 1992), p.500-308. Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, John L. Merriam, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p623-630.

Computer Model Aids Water Planning, CE July 92, p28.

Drownproofing of Low Overflow Structures, Hans J. Leu-theusser and Warren M. Birk, HY Feb. 91, p205-213.

Economical and Statistical Based On-Farm Irrigation Scheduling, L. Niel Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p146-151.

Expert System for Operating A Treated Water Supply System, Kent Keqiang Mao, (Water Resources Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), p867-871.

Karamouz, ed., 1992), p867-871.

Feasibility of Water Supply for City of Houston Subsidence Zones Five and Six, Kathlie S. Jeng Sheu, Jerry Rogers and William P. Bulloch, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p480-485.

Greenhouse Irrigation Technology Transfer in Spain, Elias Fereres, Francisco Orgaz, Nicolas Castilla and Jose Lopez, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p215-220.

Is An Instream Flow Need a Parafricial Unit of Control of Control

Is An Instream Flow Need a Beneficial Use? Robert T. Milhous, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p368-373.

Model for Prescribing Ground-Water Use Permits, James W. Male and Frederick A. Mueller, WR Sept./Oct. 92,

p543-561.

- Modeling Instantaneous Residential Demands in Municipal Water Distribution Systems, Brian D. Barkdoll and Steven G. Buchberger, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p62-67.
- The Monitoring of Water Conservation Behavior and At-titudes in Southern California, Duane D. Baumann, Eva Opitz and Diane Egly, (Risk-Based Decision Mak-ing in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p117-A. M

Multilayered, Priority-Based Simulation of Conjunctive Facilities, Elizabeth S. Andrews, Francis I. Chung and Jay R. Lund, WR Jan/Feb. 92, p32-53.

Rationalizing Water Requirements with Aid of Fuzzy Al-location Model, Janusz Kindler, WR May/June 92, p308-323.

Rocket Fuel to Earth Orbits from Near-Earth Asteroids and Comets, Anthony Zuppero, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2271-2281.

p2271-2281.
Scheduling of Ground Water Pumpage in Alluvial Aquifers to Minimize the Impact on Surface Water Diversions, John C. Tracy and Munjed Al-Sharif, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p79-83.

Simulated Citrus Water Use from Shallow Groundwater, T. A. Obreza and B. J. Boman, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p177-182.

Solving MWRA's Supply Issues Through Conservation, Marcis Kempe, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p163-

Statistical Analysis of Wastewater Flow Reduction, Roger G. Putty, M. Najmus Saquib, William O. Maddaus and Kayleen Warner, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-779.

System Operating Strategies in Water Rights Modeling and Analysis, David D. Dunn and Ralph A. Wurbs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p498-503.

Water Reduction as Justification for Permit Backsliding, Gary W. Siegel and Margaret L. Dwyer, (Environmen-tal Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156.

Water Use in Saudi Arabia: Problems and Policy Implica-tions, Abdulla Ali Al-Ibrahim, WR May/June 90, p375-388.

Extremal Wave Statistics Using Three Hindcasts, Robert M. Wyland and Edward B. Thornton, WW Jan./Feb. 91, p60-74.

Kinematics of 2-D Transient Water Waves Using Laser Doppler Anemometry, Cheung H. Kim, Robert E. Ran-dall, Sung Y. Boo and Martin J. Krafft, WW Mar/Apr. 92, p147-165.

Nonlinear Water Waves Generated by Submarine and Aerial Landslides, P. Henrich, WW May/June 92, p249-266.

A Numerical Study of Kinematics of Nonlinear Water Waves in Three Dimensions, Hongbo Xü and Dick K. P. Yue, (Civil Engineering in the Öceans V, Robert T. Hudspeth, ed., 1992), p81-98.

Recent Wave Kinematics Experimental Studies, R. E. Randall, J. Zhang, C. A. Spell and J. K. Longridge, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p607-621.

Reflection and Transmission of Water Wave by Porous Breakwater, L. H. Huang and H. I. Chao, WW Sept./ Oct. 92, p437-452.

Screen Breakwaters, A. N. Williams and W. W. Crull, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p332-335.

Status of ASCE Handbook of Hydrology, Thomas P. Wootton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p448-451.

Tuned Liquid Damper (TLD) for Suppressing Horizontal Motion of Structures, Yozo Fujino, Limin Sun, Benito M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p2017-

Water Wave Generated by a Porous Wavemaker, L. H. Huang, P. C. Hsieh and G. Z. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p336-340.

Wave Interaction with Fluid Mud in Rectangular Trench, Francis C. K. Ting, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p75-

## Waterfront facilities

Colgate Palmolive Transportation Impact Case Study, Martin J. Wells and Jay S. Bockisch, (Site Impact Traf-fic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p134-138.

Design and Construction of Waterfront Facilities at U.S. Navy Homeport at Ingleside, Texas, Edward H. Stehmeyer, Jr., David W. Mock and Donald L. God-deau, (Ports '92, David Torseth, ed., 1992), p644-656.

Design of Marina Replacement Facilities, Ronald M. Noble and Scott M. Noble, (Ports '92, David Torseth, ed., 1992), p275-287.

New Cruise Terminal for San Francisco, Erik Norgaard, (Ports '92, David Torseth, ed., 1992), p58-71.

On-Off Terminal Ship-to-Rail Transfer, Asaf Ashar, (Ports '92, David Torseth, ed., 1992), p108-120.

Pier and Wharf for U.S. Navy Homeport, Everett, Arn-finn Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (*Ports '92*, David Torseth, ed., 1992), p616-629.

Transportation Management in the Anacostia Waterfront Washington, D.C. Louis J. Slade, (Site Impact Traffic Assexsment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, p. 159-163.

Watershed management
Baltimore City's Geographical Information Data Base for
the NPDES Stormwater Program, George G. Balog,
William P. Stack, Kenneth T. Belt and Nathan J. Beil,
(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), p498-503.
Dry Creek Watershed Flood Control Plan: A Case Study,
Eric S. Clyde, M. N. Saquib and Dennis J. Huff, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p287-292.
Ecuador—The Lower Guayas Flood Control and Drainage Project—A Case Study, Peter Wittenberg and Walter Ochs, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman,
ed., 1992), p275-280.
Liberty Reservoir Stormwater Retrofit Project. George G.

ed., 1992), p275-280.

Liberty Reservoir Stormwater Retrofit Project, George G.

Balog, William P. Stack, Kenneth T. Belt and Prakash
Mistry, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), p346-351.

Watershed Models for Resources Management Decisions,
Alan M. Lumb, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), p884889.

Watersheds

Accumulation Effects of Stormwater Management Detention Basins, Robert G. Traver and Ronald A. Chadderton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p925-930.

Automated Delineation of Catchment Area Boundaries with TINs, Norman L. Jones and James Nelson, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p347-352.

Automated Diffusion Wave Modeling of Watershed Hydraulics, Robert N. Eli, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p353-354.

BRASS Modeling of Lofza Reservoir, Puerto Pico Control of Saving Saving

p353-354.

BRASS Modeling of Loíza Reservoir, Puerto Rico, for Sediment Management Operations, Gregory L. Morris, Raul Colón, Robert Laura and G. T. Anderson, (Water Resource-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p837-842.

Distribution of Wetland Hydrologic Parameters, Misganaw Demissie and Abdul Khan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p470-475.

Dry Weather Field Screening as an Indicator for Urban

Bhowmik, ed., 1992), p4/0-475.
Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, Hans J. Peterson and William R. Grout, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p516-522.

Effects of Drainage and Water-Management Practices on Hydrology, K. D. Konyha, R. W. Skaggs and J. W. Gil-liam, IR Sept./Oct. 92, p807-819.

liam, IR Sept./Oct. 92, p807-819.
Fractal Concept Used in Time-of-Concentration Estimates, Gert Aron, James E. Ball and Thomas A. Smith, IR Sept./Oct. 91, p635-641.
A GIS Based Synthetic Watershed Sediment Routing Model, Roger H. Smith, Surya N. Sahoo and Larry W. Moore, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p200-207.
Hydraulic Engineering, Saving a Threatened Resource—In Version of Solutions, Mohammad Karamouz, ed., 1992), p200-207.

Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.

Hydrologic Model for Drained Forest Watershed, E. J. McCarthy, J. W. Flewelling and R. W. Skaggs, IR Mar./Apr. 92, p242-255.

Hydrologic Parameter Estimation Using Geographic In-formation System, Nageshwar R. Bhaskar, Wesley P. James and Ravikumar S. Devulapalli, WR Sept./Oct.

Hydrological Aspects of Droughts, A. R. Rao and A. Al-Wagdani, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p334-340.

Modeling Nutrient Loadings from Croplands in the Chesapeake Bay Watershed, Anthony S. Donigian, Jr. and Avinash S. Patwardhan, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p817-822.

Modeling Stormwater Basin Effects, Robert G. Traver and Ronald A. Chadderton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p855-860.

Modeling Variable Witch P. Go.

and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p855-860.
Modeling Variable Width Buffer Zones with a Geographic Information System, Gary Ostroff, (Water Resource-Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p213-218.

Prediction of Sedimenigraph from a Small Watershed in Poland in a Changing Environment, K. Banasik and D. E. Woodward, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p93-3498.

Progress Report ARS/SCS Runoff Curve Number Work Group, D. E. Woodward and W. J. Gburek, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p378-382.

Retention Parameter Estimates for Curve Number Runoff Procedure, W. Carlisle Mills, Adrian W. Thomas, Anthony L. Dillard and Willard M. Snyder, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p372-377.

Rock Creek—Crests Sediment Management Plan, Larry L. Harrison, (Water Resource—In Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p372-377.

Sensitivity of HMR-51/52/PMP-Based Probable Maximum Flood (PMF) to Basin Lag and Land Use, Oner Yucel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p695-700.

A Stochastic Water Quality Model for Urban Watersheds, D. E. Barké, J. F. Cruise and X. Mo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p695-700.

Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p791-796.

Streamflow Forecasting Using Trainable Neural Networks, Jason Smith and Robert N. Eli, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p56-61.

Three Dimensional Modeling of Watershed Hydrology, M. N. Saquib and M. L. Kavvas, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p391-396.

Topographic Effects on Stormflow Acidity, David Wolock, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p878-883.

Trends in Streamflow Due to Wetland Drainage, Abdul Khan and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p476-481.

Unit Hydrograph Derivation Using Geographic Information System, W. C. Hughes, L. E. Johnson, K. S. Medde and L. Tunnell, (Water Resource» Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12.

Usefulness of Low-Cost Watershed Monitoring: A Case Study, James G. Turek and David W. Blaha, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12-717.

Variations in Curve Number for a Reclaimed AML Site, K. James Fornstrom and James L. Smith, (Irrigation

Karamouz, ed., 1992), p712-717.
Variations in Curve Number for a Reclaimed AML Site, K. James Fornstrom and James L. Smith, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p389-394.
Water Quality Management Planning—Bird River Watershed, Alan Cavacs, Leslie Shoemaker and Julie Wright, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101.

Flow in Trapezoidal Channels, W. E. Hart, B. P. Thoreson and S. A. Musil, IR Nov./Dec. 92, p971-976.

Laptop Automated Navigation Aid Positioning System with Differential GPS, Charles F. Klingler, Michael R. Wroblewski and Scott Krammes, SU Nov. 92, p130-

Risky Business: Can We Believe Port Risk Assessments? John R. Harrald, Thomas A. Mazzuchi and Christo-pher M. Stone, (Ports '92, David Torseth, ed., 1992),

Sediment Concentration Changes Caused by Barge Tows, J. Rodger Adams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p677-

Summary Conclusions & Recommendations of the 1991 Washington State Ports and Transportation Systems, Paul Chiloote and Paul Sorensen, (Ports '92, David Torseth, ed., 1992), p1-14.

Surface Sampling of Dry and Underwater Sediment Deposits, Jon Fripp and Panayiotis Diplas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p853-858.

## Waterworks

Waterworks

Earthquake Hazard Investigative Procedures for Central
United States Waterworks, James R. Blacklock, (Lifeline Earthquake Engineering in the Central and Eastern
U.S., Donald B. Ballantyne, ed., 1992), p1-15.

Impact on Water Supply of a Seismically Damaged Water Delivery System, M. Shinozuka, H. Hwang and M. Murata, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992). p43-57.

p43-57.

Risk Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, M. A. Cassaro, M. J. Cassaro, R. K. Ragade and S. Alexander, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p29-42.

Seismic Mitigation of the Memphis Water System, Kevin M. Poc, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p16-28.

## Wave action

Wave action Erosion of a Thin Lutocline Under Homogeneous Turbu-lence, Panagiotis D. Scarlatos, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), p263-268.

Experimental Research on Groyne Stability Under Very Oblique Wave Action, Antonio Baonza and José M. Berenguer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p718-732.

Field Monitoring of a Modular Detached Breakwater System, Robert M. Sorensen and J. Richard Weggel, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), pl 89-204.

Irregular Wave Setup and Run-up on Beaches, Nobuhisa Kobayashi and Andojo Wurjanto, WW July/Aug. 92, p368-386.

inearisation and Offshore Fatigue Reliability, R. E. Melchers and M. Ahammed, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p5-8.

Model Tests for Expansion of Anaheim Bay Naval Har-bor, Robert R. Bottin, Jr. and Dan Muslin, (Ports '92, David Torseth, ed., 1992), p768-776.

Observation of the Post-Construction Performance of a System of Groins along an Eroding Beach, C. I. Mout-zouris, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-319.

Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, W. I. Moubayed and A. N. Williams, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188-

Simulation of Nonlinear Wave Runup on Steep Impermeable Slopes, A. N. Williams, W. G. McDougal, S. Zhang and S. N. Stevenson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p203-217.
Sylvan Beach Pier Rehabilitation Study, Peter W. Soltys, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662.

Wave Effects on Offshore Structures—Some Recent Re-search, Michael Isaacson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p381-426.

Wave attenuation
Dynamic Stresses in Granular Assemblies with Microstructural Defects, A. Shukla, C. Y. Zhu and Y. Xu, EM Jan, 92, p190-201.
Hydraulic Design of Perforated Breakwaters, M. Fugazza and L. Natale, WW Jan-/Feb 92, p1-14.
Motion Response and Wave Attenuation of Linked Floating Breakwaters, Iraklis A Valioulis, WW Sept/Oct.
90, p558-574.

Wave Attenuation in Viscoelastic Continuum with Fad-ing Memory, Song-tao Xue, Jun Tobita, Tetsuya Han-zawa and Masanori Izumi, EM Aug. 92, p1597-1611.

Wave climatology
Experimental Studies for the Port of Bilbao Extension,
José R. Iribarren and María J. Martín, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p149-157.

Numerical Modeling of Proposed Kawaihae Harbor, HI, Linda S. Lillycrop and Stanley J. Boc, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992), neering Practice p412-424.

Spectral and Statistical Characteristics of Wind Waves Off Canary Islands, Germán Rodríguez Rodríguez, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p622-636.

Wave damping
Design of Wave Barriers for Reduction of Horizontal
Ground Vibration, Tahmeed M. Al-Hussaini and
Shahid Ahmad, GT Apr. 91, p616-636.
Effects of Bottom Friction on Wave Breaking Using
RCPWAVE Model, Jerome P.-Y. Maa and S.-C. Kim,
WW July/Aug. 92, p387-400.

Wave diffraction

Effects of Bottom Friction on Wave Breaking Using RCPWAVE Model, Jerome P.-Y. Maa and S.-C. Kim, WW July/Aug. 92, p387-400.

Nonlinear Diffraction of Random Waves by a Vertical Cylinder, Ahsan Kareem, C. C. Hsieh and A. N. Williams, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p459-462.

Screen Breakwaters, A. N. Williams and W. W. Crull, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992, p. 332-335,

Time-Domain Second-Order Wave Diffraction in Three Dimensions, Michael Isaacson and Kwok Fai Cheung, WW Sept./Oct. 92, p496-516.

TLP Fatigue Due to Second-Order Springing, S. R. Winterstein, T. Marthinsen and T. C. Ude, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p455-458.

Wave energy
Economics of Wave Power, George Hagerman, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p213-257.

Editor's Preface, Richard J. Seymour, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), pl-3.

The Effect of Wave Grouping on the Characteristic Wave Height, Chia Chuen Kao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p83-86.

Facilitating Technology for Electric Power Generation, Ian Pope, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p276-292.

Richard J. Seymour, ed., 1992), p276-292.

Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992. 6-8726-289-4, 313pp.

State of the Art in Wave Power Recovery, A. Douglas Carmichael and Johannes Falnes, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p182-212.

Wave equation
Dynamic Compaction Analysis, Y. K. Chow, D. M. Yong,
K. Y. Yong and S. L. Lee, GT Aug. 92, pl 141-1157.
A Finite Element Model for Three-Dimensional Flows
Along the West Coast of Vancouver Island, M. G. G.
Foreman, R. E. Thomson, D. R. Lynch and R. A.
Walters, (Estuarine and Coastal Modeling, Malcolm L.
Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed.,
Ralph Cheng, ed. and Craig Swanson, ed., 1992),
p574-585.

Wave Attenuation in Viscoelastic Continuum with Fad-ing Memory, Song-tao Xue, Jun Tobita, Tetsuya Han-zawa and Masanori Izumi, EM Aug. 92, p1597-1611.

Wave forces
Current Blockage Effects on Model-Scale Offshore Platform, Timothy D. Finnigan, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), p294-310.
Dynamic Response Characteristics of Jack-Up Drilling Units, David T. McDonald and Robert G, Bea, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), p906-920.

1992), p906-920.

Experimental Research on Groyne Stability Under Very Oblique Wave Action, Antonio Baonza and José M. Berenguer, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p718-732.

Gravel Equilibrium Beach Design for Arresting Short Erosion at Flathead Lake, Montana, Steven L. Da Costa, Joseph L. Scott and David P. Simpson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p154-169.

Near Ocean Surface, Sau-Lon James Hu and Dongsheng Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p91-

Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, Sufian A. Khondker, Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), p.249-256. Nonlinear Shoaling and Impact of Waves on Coastal Structures, S. T. Grilli, M. A. Losada, F. Martin and I. A. Svendsen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82. Probability of Wave Force on Horizontal Members, Laurence Z. H. Chuang and C. C. Tung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p467-480.

p467-480.
Recent Wave Kinematics Experimental Studies, R. E. Randall, J. Zhang, C. A. Spell and J. K. Longridge, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p607-621.
Reliable Design-Wave Force Predictions for Seabed Pipelines, Robert A. Grace, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p481-493.
Responses of Bilinear and Impacting Systems Subjected to Regular Waves, Somchai Sumanuskajonkul and Sau-Lon James Hu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p196-199.

Sau-Lon James Hu, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p196-199.

Sea Floor Wave-Induced Water Kinematics for Design of Pipeline, Leon Borgman and Robert Hudspeth, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p444-466.

The SIMBAT Software Package for Stochastic Interpolation of Ocean Wave Kinematics as an Aid in the Engineering Design of Large Floating Structures, Leon Borgman, David Shields, Robert Zucek and Warren Bartel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p585-606.

A Simple Method to Compute Wave Loads on a TLP, Moo-Hyun Kim, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p158-172.

Spectral and Statistical Characteristics of Wind Waves Off Canary Islands, Germán Rodríguez Rodríguez, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p522-636.

Stability of Accropode(R) and Comparison with Parallelepipedic Block, Braulio G. Madrigal and José Lozano, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p704-717.

Static Wave Force Procedure for Platform Design, John C. Heideman and Timothy O. Weaver, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p704-717.

Time-Domain Second-Order Wave Diffraction in Three Dimensions, Michael Isaacson and Kwok Fai Cheung, WW Sept./Oct. 92, p496-516.

TLP Fatigue Due to Second-Order Springing, S. R. Winterstein, T. Marthinsen and T. C. Ude, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p455-458.

Two Basic Concepts in Offshore Engineering, Guillermo D. Hahn, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p188-191.

User-Friendly PC-Based Design Package for Gravity-Type Seawalls, K. W. Chau, WW May/June 92, p267-279.

279.

Wave Effects on Offshore Structures—Some Recent Research, Michael Isaacson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p381-426.

Wave Exciting Forces on a Platform Fixed in Nonlinear Shallow Water Waves, Gregory S. Hook, Cheung H. Kim and Erick Huang, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p311-325.

Wave Induced Vortex Near Seashore, Tai-Wen Hsu, Shan-Hwei Ou and Chun-Wei Sun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p466-469.

Wave Runup and Forces on Cylinders in Resular and

ed., 1992), p466-469.

Wave Runup and Forces on Cylinders in Regular and Random Waves, John M. Niedzwecki and Arun S. Duggal, WW Nov/Dec. 92, p615-634.

Wave Slamming on a Horizontal Circular Cylinder, Michael Isaacson and Sundar Prasad, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p652-666.

Wave-Current Interaction with a Large Structure, Michael Isaacson and Kwok Fai Cheung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80.

Wave generation

Landslide-Generated Waves in Reservoirs, C. J. Tang and J. F. Lee, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p220-223.

Water Wave Generated by a Porous Wavemaker, L. H. Huang, P. C. Hsieh and G. Z. Chang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p336-340.

Wave Forecasting for Construction in Mobile Bay, Scott L. Douglass, William W. Schroeder and John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), 9713-727.

Wave groups
The Effect of Wave Grouping on the Characteristic Wave
Height, Chia Chuen Kao, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p83-86.

Wave height

wave neight
Comparison of Model and Field Results for Barbers Point
Harbor, Michael J. Briggs, Linda S. Lillycrop and
David D. McGehee, (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), p387-399.

The Effect of Wave Grouping on the Characteristic Wave
Height, Chia Chuen Kao, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,

Extremal Wave Statistics Using Three Hindcasts, Robert M. Wyland and Edward B. Thornton, WW Jan/Feb. 91, p60-74. List of Sea-State Parameters, IAHR Working Group on Wave Generation and Analysis, WW Nov./Dec. 89, p793-808.

p793-808. Measured Internal Kinematics for Shoaling Waves with Theoretical Comparisons, M. W. Griffiths, W. J. Easson and C. A. Greated, Ww May/June 92, p280-299. Prediction of Storm/Normal Beach Profiles, Robert A. Dalrymple, WW Mar/Apr. 92, p193-200. Stochastic Time-Series Representation of Wave Data, Norman W. Scheffner and Leon E. Borgman, WW July/Aug, 92, p337-331.

Wave Forecasting for Construction in Mobile Bay, Scott

Wave Forecasting for Construction in Mobile Bay, Scott L. Douglass, William W. Schroeder and John T. Robinson, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p713-727.

Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodriguez, Maria C. Arbelsez, Takenori Satoh and Edward Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992), p390-402.

Wave propagation
Design, Construction, and Performance of a Baffled
Breakwater, Jonathan W. Lott and Walter E. Hurtienne, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p487-502.

Detection of Cracks in Reinforced Concrete Cans, Christian Grosse, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p413-416.

Differential Motions in Sedimentary Valleys, Apostolos S. Papageorgiou, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

Dynamic Stresses in Granular Assemblies with Micro-structural Defects, A. Shukla, C. Y. Zhu and Y. Xu, EM Jan. 92, p190-201.

Effects of Multiple Modes on Rayleigh Wave Dispersion Characteristics, Kohji Tokimatsu, Shuji Tamura and Hisaya Kojima, GT Oct. 92, pl 529-1543.

Evaluation of In Situ Effective Shear Modulus from Dis-persion Measurements, Christos Vrettos and Bernd Prange, GT Oct. 90, p1581-1585.

Flexible Porous Breakwater, Keh-Han Wang and Xugui Ren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p224-227.

Frequency Response of Disordered Periodic Structures, G. Q. Cai and Y. K. Lin, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.796-799.

Linear Surface Waves Over Rotating Fluids, Ting-Kuei Tsay, WW Mar./Apr. 91, p156-171.

1889, Ww. Mall-App. 38, para-ex-Micromechanical Simulation of Wave Propagation in Dense Granular Assemblies, J. S. Lee, M. Y. Ma and A. B. Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p417-420.

On the Role of Dispersive Waves in Strain-Softening Media, L. J. Sluys and R. de Borst, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p624-627.

Propagation of Long Waves Onto Shelf, Derek G. Goring and Fredric Raichlen, WW Jan./Feb. 92, p43-61.

Regolith Mechanics, Dynamics, and Foundations, Mo-hammed M. Ettouney and Haym Benaroya, AS Apr. 92, p214-229.

Resonant Column Testing of Dynamic Rock Properties, D. V. Morris and J. G. Delphia, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p527-530.

Screen Breakwaters, A. N. Williams and W. W. Crull, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p332-335.

Seismic Wave Propagation by Finite Differences on the Connection Machine, Jacek Myczkowski, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p115-118.

Some Modeling and Analysis Techniques for Wave Propagation in Random Media, Georges A. Bécus, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p377-380.

The Talbert Channel Ocean Outlet Project, Craig B. Leidersdorf, Kenneth E. Smith and Ruh-Ming Li, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p745-761.

Taylor-Galerkin Method for Wind Wave Propagation, H. S. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p87-90.

Use of Short-Period Microtremors for V<sub>2</sub> Profiling, Kohji Tokimatsu, Kenichiro Shinzawa and Shinichi Kuwaya-ma, GT Oct. 92, p1544-1558.

Wave Propagation in a Nonlocal Strain-Softening Continuum, Gilles Pijaudier-Cabot and Antonio Huerta, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p620-623.

Wave Propagation in a Randomly Layered Medium, Werner Kohler, George Papanicolaou and Benjamin White, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p381-383.

Wave Propagation in Fluid Loaded Periodic Structures, Michael L. Accorsi, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p212-215.

Wave Propagation in Solids, A. R. Robinson, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636.

Wavefront Propagation in Random Granular Media, Martin Ostoja-Starzewski, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p384-387.

Considerations in Using Bragg Reflection for Storm Ero-sion Protection, James A. Bailard, Jack W. DeVries and James T. Kirby, WW Jan./Feb. 92, p62-74.

Evaluation of Concrete Bridges by Impact-Echo, Al Ghorbanpoor, Y. P. Virmani and G. R. Fatemi, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p82-93. Flexible Porous Breakwater, Keh-Han Wang and Xugui Ren, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p224-227.

Open Boundary Condition for Multiple Level FE Tidal Current Flow Analysis, Toshio Kodama and Mutsuto Kawahara, (Hydrasilic Engineering: Saving a Threatend Resource—In Search of Solutions, Marshall Jenings, ed. and Nani G. Bhowmik, ed., 1992), p442-447.

Wave Barriers: An Environmentally Benign Alternative, Jeffrey F. Gilman and Dennis Nottingham, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p479-486.

Ave refraction each-Nourishment Performance Predictions, R. G. Dean and Chul-Hee Yoo, WW Nov./Dec. 92, p567-

Effects of Bottom Friction on Wave Breaking Using RCPWAVE Model, Jerome P.-Y. Maa and S.-C. Kim, WW July/Aug. 92, p387-400.

Shoaling and Decay of Two Wave Trains on Beach, Jane McKee Smith and Charles L. Vincent, WW Sept./Oct. 92, p517-533.

Wave runup Estreme Values of Run-Up on Beaches, Scott L. Douglass, WW Mar/Apr. 92, p.220-224. Irregular Wave Setup and Run-up on Beaches, Nobuhisa Kobayashi and Andojo Wurjanto, WW July/Aug. 92, p.368-386.

Kobayashi and Andojo Wurjanto, WW July/Aug. 92, p368-386.

Nonlinear Wave Runup on Large Circular Cylinders, David L. Kriebel, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p173-187.

Robust Approach to Wave Runup Calculation, Todd L. Walton, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p879-891.

Shoreline Profile of Stokes-Mode Edge Waves, Harry H. Yeh, WW Jan./Feb. 92, p112-116.

Simulation of Nonlinear Wave Runup on Steep Impermeable Slopes, A. N. Williams, W. G. McDougal, S. Zhang and S. N. Stevenson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p203-217.

Wave Runup and Forces on Cylinders in Regular and Random Waves, John M. Niedzwecki and Arun S. Duggal, WW Nov./Dec. 92, p615-634.

Wave Runup on Smooth and Rock Slopes of Coastal Structures, Jentsje W. vån der Meer and Cor-Jan M. Stam, WW Sept./Oct. 92, p534-550.

Wave-Current Interaction with a Large Structure, Michael Isaaeson and Kwok Fai Cheung. (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80.

pob-80.

Wave spectra

Barbers Point Harbor: A Unique Solution for Port Upgrade, Michael J. Briggs and Eivind Bratteland, (Ports '92, David Torseth, ed., 1992), p777-790.

Comparison of Model and Field Results for Barbers Point Harbor, Michael J. Briggs, Linda S. Lillycrop and David D. McGehee, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p387-399.

A Dual Approach to Low Frequency Energy Definition in a Small Craft Harbor, Chuck Mesa, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p400-411

411.

Estimating Wave-Induced Bottom Velocities at Vertical Wall, Steven A. Hughes, WW Mar/Apr. 92, p175-192.

F.K. Spectra From a Haskell-Type Source in a Multiple-Layered Haif-Space, George Deodatis, Andronikos Theobaris and Masanobu Shinozuka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p272-275.

Inner Harbor Wave Conditions due to Breakwater Overtopping, Fredric Raichlen, Jack C. Cox and Jerald D. Ramsden, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p425-446.

Intermittent Kinematics for Nonlinear Random Waves Near Ocean Surface, Sau-Lon James Hu and Dongsheng Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p91-94.

Irregular Wave Setup and Run-up on Beaches, Nobuhisa Kobayashi and Andojo Wurjanto, WW July/Aug. 92, p368-386.

Kinematics of Nonlinear Random Waves near Free Surface, Sau-Lon James Hu and Dongsheng Zhao, EM Oct. 92, p2072-2086.

List of Sea-State Parameters, IAHR Working Group on Wave Generation and Analysis, WW Nov./Dec. 89.

p793-808.

- Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, David D. McGehee, (Ports '92, David Torseth, ed., 1992), p591-
- Shoaling and Decay of Two Wave Trains on Beach, Jane McKee Smith and Charles L. Vincent, WW Sept./Oct. 92, p517-533.
- Taylor-Galerkin Method for Wind Wave Propagation, H. S. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p87-90.

Wave tanks

Wave table
Laboratory Simulations of Directionally Spread Shoaling
Waves, Steve Eigar, R. T. Guza, M. H. Freilich and M.
J. Briggs, WW Jan./Feb. 92, p87-103.
Wave Exciting Forces on a Platform Fixed in Nonlinear
Shallow Water Waves, Gregory S. Hook, Cheung H.
Kim and Erick Huang. (Civil Engineering in the Oceans
V, Robert T. Hudspeth, ed., 1992), p311-325.

Wave velocity

Free Vibration of Embedded Foundations: Theory Versus Experiment, George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401.

Intermittent Kinematics for Nonlinear Random Waves Near Ocean Surface, Sau-Lon James Hu and Dongsheng Zhao, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p91-94.

Junearisation and Offshore Fatigue Reliability, R. E. Melchers and M. Ahammed, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p5-8.

ed., 1992), p5-8.

Measurement of Shock Pressure from FWD on a Concrete Pavement by Impedance-Matched Shock Gauge, Piyush K. Dutta and John Kalafut, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228.

Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, Chaim J. Poran, Jorge A. Rodriguez, Maria C. Arbelaez, Takenori Satoh and Edward Kavazanjian, Jr., (Ports '92, David Torseth, ed., 1992), p390-402.

p390-402.
Seasonal Soil Strength by Spectral Analysis of Surface Waves, Bernard D. Alkire, CR Mar. 92, p22-38.
Wave Induced Vortex Near Seashore, Tai-Wen Hsu, Shan-Hwei Ou and Chun-Wei Sun, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p466-469.

Wares
3D Hydrodynamic Model Validation Through Simulations of Dynamic Processes, Leif H. Slordal, Eivind A.
Martinsen and Alan F. Blumberg, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p525-537.
Armor Stability on Submerged Breakwaters, Miguel Losada, Nobuhisa Kobayashi and Francisco L. Martín, WW
Mar/Apr, 92, p207-212.
Characteristics of Waves and Drawdown Generated by

Mar/Apr. 92, p201-212.

Characteristics of Waves and Drawdown Generated by Barge Traffic on the Upper Mississippi River System, Ta Wei Soong and Nani G. Bhowmik, (Hydraudic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p672-676.

Bhowmik, ed., 1992), p672-676.
Component Wave Interactions and Irregular Wave Kinematics, Jun Zhang, Robert E. Randall and C. Anthony Spell, WW July/Aug. 92, p401-416.
The Control of Large Amplitude Liquid Sloshing with Moving Baffles, T. C. Su and Y. X. Wang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p208-211.
EQSWP: Extended Unsteady-Flow Double-Sweep Equation Solver, Theodor Strelkoff, HY May 92, p735-742.
Estimating Wave-Induced Bottom Velocities at Vertical Wall, Steven A. Hughes, WW Mar./Apr. 92, p175-192.
Estimation of Wind Fields for Coastal Modeling, Edward F. Thompson and Zeki Demirbilek (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p564-573.

Field Verification of a Wave-Induced Current Model, Jane McKee Smith, (Estuarine and Coastal Modeling, Malcoim L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p95-104.

Flexible Membrane Wave Barrier, Gary O. Thompson, Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p129-148.

Hurricane Camille Shelf Wave Simulation Using a Numerical Ocean Circulation Model, Le Ngoc Ly and Lakshmi Kantha, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1932), p586-93.

ed., 1992), p586-593.
Hydrodynamic Forces and Evolution of a Nearshore Berm at South Padre Island, Texas, James A. Aidala, Neil T. McLellan and Cheryl E. Burke, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239.
Interaction of Steep Waves with Vertical Walls, D. Sen, WW Sept./Oct. 92, p453-473.
Irregular Wave Setup and Run-up on Beaches, Nobuhisa Kobayashi and Andojo Wurjanto, WW July/Aug. 92, p368-386.
Kinematic Wave Controversy, Victor M. Ponce, HY Apr. 91, p511-525.
Kinematics of 2-D Transient Water Waves Using Laser

J. 1931-343.
 Kinematics of 2-D Transient Water Waves Using Laser Doppler Anemometry, Cheung H. Kim, Robert E. Ran-dall, Sung Y. Boo and Martin J. Krafft, WW Mar./Apr. 92, p147-165.

y4, p147-103. Laboratory Study of Oil Slick Subjected to Nearshore Circulation, A. G. L. Borthwick and S. A. Joynes, EE Nov./Dec. 92, p905-92.
List of Sea-State Parameters, IAHR Working Group on Wave Generation and Analysis, WW Nov./Dec. 89, p193-808.

odelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, N. Jothi Shankar, H. F. Cheong and C. T. Chan, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),

Parametric and External Excitation of Marine Risers, S. K. Thampi and J. M. Niedzwecki, EM May 92, p942-960.

Scattering of Waves by Steel Reinforcement in Concrete, Eduardo Kausel and R. Ghibril, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p956-959.

ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), 955-6959.

Scour Around a Vertical Pile in Waves, B. Mutlu Sumer, Jørgen Fredsee and Niels Christiansen, WW Jan./Feb. 92, p15-31.

Shoaling and Decay of Two Wave Trains on Beach, Jane McKee Smith and Charles L. Vincent, WW Sept./Oct. 92, p517-533.

Shoreline Profile of Stokes-Mode Edge Waves, Harry H. Yeh, WW Jan./Feb. 92, p112-116.

Specifying the Offshore Environment, George Z. Forristall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1-41.

Stochastic Time-Series Representation of Wave Data, Norman W. Scheffner and Leon E. Borgman, WW July/Aug, 92, p337-351.

Time-Domain Second-Order Wave Diffraction in Three Dimensions, Michael Isaacson and Kwok Fai Cheung, WW Sept./Oct. 92, p496-516.

Wave Effects on Offshore Structures—Some Recent Research, Michael Isaacson, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p381-426.

Wave Slamming on a Horizontal Circular Cylinder, Michael Isaacson and Sundar Prasad, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p563-666.

ave-Current Interaction with a Large Structure, Michael Isaacson and Kwok Fai Cheung, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80.

p66-80.

Wave-Induced Effective Stress in Seabed and Its Momentary Liquefaction, Tetsuo Sakai, Katsuya Hatanaka and Hajime Mase, Ww Mar/Apr. 92, p202-206.

Wavelet Transform Analysis of Several Transient or Nonstationary Phenomena in Engineering Mechanics, James T. Kirby, Michael J. Chajes and Jeffrey A. Melby, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p204-207.

Wave-Motion Stability in Canals with Automatic Con-trollers, Simion Hancu and Paul Dan, HY Dec. 92, p1621-1638.

p1621-1638.

Weather data

Evapotranspiration Data Management in California, R.

L. Snyder and W. O. Pruitt, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p128-133.

Weather Advisor System for Construction Duration Estimation: Potential of Integrating KBS's and CD-ROM
Databases, Diego Echeverry and Moonja P. Kim,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p833-840.

Weather forecasting
Weather forecasting
Weather Advisor System for Construction Duration Estimation: Potential of Integrating KBS's and CD-ROM
Databases, Diego Echeverry and Moonja P. Kim,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), p833-840.

Jeff R. Wright, ed., 1992), p835-e40.

Weather modification
Cloud Seeding: The Engineering is Done, but What About Social Impacts? Maurice Roos, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p365-570.

The Present Status of Precipitation Enhancement by Cloud Seeding, Roef T. Bruinties, T. L. Clark and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1993), p612-617.

D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed. 1992), p612-617.

Results from a Long-Term Winter Cloud Seeding Program in Utah, Don A. Griffith, John R. Thompson and Dan A. Risch, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p559-564.

Targeting of Agl in a Utah Winter Orographic Storm, James A. Heimbach, Jr. and Arlin B. Super, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p553-558.

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, T. L. Clark, R. T. Bruintjes and W. D. Hall, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p606-611.

Weathering
In-Service Durability Evaluation of Armourstone, John-Paul Latham, (Durability of Stone for Rubble Mound
Breakwaters, Orville T. Magoon, ed. and William F.
Baird, ed., 1992), p6-18.

Web beams
Commentary on Proposed Specification for Structural
Steel Beams with Web Openings (with Design Example), ASCE Task Committee on Design Criteria for
Composite Structures in Steel and Concrete, ST Dec.
92, p3325-3349.

92, p3323-3349.
Proposed Specification for Structural Steel Beams with Web Openings, ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete, ST Dec. 92, p3315-3324.

Webs
Slab Behavior in Composite Beams at Openings. I: Analysis, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p.2287-2303.
Slab Behavior in Composite Beams at Openings. II: Tests and Verification, Soon Ho Cho and Richard G. Redwood, ST Sept. 92, p.2304-2322.

Wedges
Antiplane Problems of Monoclinic Material, Chien-Ching
Ma, EM Sept. 92, p1765-1782.

Vergan Live Load Models Based on WIM Data, Andrzej S. Nowak and Hani Nassif, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p587-590.

Weighting functions

Definition of a Weighting Function for Rainfall in Aggregated Rainfall-Runoff Models, Paolo Bartolini and Juan B. Valdes, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p537-

Weintraub, Norman G. Water Executive Weintraub Dies, NE Apr. 92, p5.

Critical Depth Relations for Flow Measurement Design, A. J. Clemmens and M. G. Bos, IR July/Aug. 92, p640-644.

644.

Design Procedure for Flow Over Side Weirs, Ali Uyumaz and Roger H. Smith, IR Jan./Feb. 91, p?9-90.

Flow and Energy Dissipation Over Stepped Gabion Weirs, L. Peyras, P. Royet and G. Degoutte, HY May 92, p?07-717.

Gas-Transfer Measurements Using Headspace Analysis of Propane, John R. Thene and John S. Gulliver, EE Nov./Dec. 90, p1107-1124.

Nov/Dec. 90, p1107-1124.
Innovative Reregulation Weirs, Gary E. Hauser, James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66.
Innovative Spillway Designs, Thomas E. Hepler, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227.
Momentum Model of Flow Past Weir, Amruthur S. Ramamurthy, Ngoc-Diep Vo and German Vera, IR

Ramamurthy, Ngoc-Diep Vo and German Vera, IR Nov/Dec. 92, p988-994. The OCEA Awards of Merit, Teresa Austin, CE July 92,

The OLEA Awards of Merit, Teresa Austin, C.E. July 74, p50-53.
Side Weir in Triangular Channel, Ali Uyumaz, IR Nov./ Dec. 92, p965-970.
Transients in Canal Network, Rajeev Misra, K. Sridharan and M. S. Mohan Kumar, IR Sept./Oct. 92, p690-707.

Welded Joints

Fatigue Strength of Welded Joints Under Broadband
Loadings, David P. Kihl, Shahram Sarkani and James
A. Kuny, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p428-

Welding

Welding
Homopolar Pulse Butt Welding of API 5L Line Pipe, Paul
W. Haase, Zwy Eliezer, Robert Carnes, John Gully and
Mike Harville, (Civil Engineering in the Oceans V,
Robert T. Hudspeth, ed., 1992), 881-827.
On-Orbit Chipless Cutting and Tube Welding in Space
Station Freedom, William R. Wessels, Mitchell D.
Mulder and Brace B. Daniel, (Engineering, Construction, and Operations in Space III, Willy Z. Sach, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992), p815826.

T-Joints in Rectangular Hollow Sections Subject to Com-bined Actions, Xiao-Ling Zhao and Gregory J. Han-cock, ST Aug. 91, p2258-2277.

Weldments
Critical Stresses in Pintle, Weldment and Top Head of
Nuclear Waste Container, Samaan G. Ladkany and
Brett R. Kniss, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Program Committee, 1992), pl 253-1260.
Weldment Design for RHS Truss Connections. I: Applications, George S. Frater and Jeffrey A. Packer, ST
Oct. 92, p2784-2803.
Weldment Design for RHS Truss Connections. II: Experimentation, George S. Frater and Jeffrey A. Packer, ST
Oct. 92, p2804-2820.

Welds Application of Fracture Mechanics Methodology to Assessment of Weld Defects in Offshore Platforms, T. M. Hsu, E. W. Carter, S. L. Fu and J. S. Mitchell, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p733-749.

Comments on L'Ambiance Plaza Lifting Collar/ Shearheads, William McGuire, CF May 92, p78-85. Fatigue of Welded Cruciforms Subjected to Narrow-Band Loadings, S. Sarkani, D. P. Kihl and J. E. Beach, EM Feb. 92, p296-311.

Feb. 92, p296-311. Homopolar Pulse Butt Welding of API 5L Line Pipe, Paul W. Haase, Zwy Eliezer, Robert Carnes, John Gully and Mike Harville, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p813-827.

Robert 1. Hutspess, ed., St. P. Martin, Grand Matter Recharge, John A. Izbicki, Robert L. Michel and Peter Martin, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p122-127. Case Study: Design of Groundwater Quality Monitoring Systems, Leonard Cilli and Richard Bizub, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p75-79.

Critical Public Issues for Well Head Protection, Daniel J. Van Abs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p274-279. Decision Analysis Model for Well Rehabilisation and Groundwater Development, Moses Lake, Washington, R. H. Anderson, W. J. Roberts and D. Banton, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p537-542.

Evaluation of Collection-Well Parameters for DNAPL, K. Schmidtke, E. McBean and F. Rovers, EE Mar./Apr. 92, p183-195.

nplementing a Wellhead TCE Removal Project in Red-lands, Richard Corneille and Michael Huffstutter, (Em-vironmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p315-320.

Performance of an Embankment Dam With Partial Cut-off, Pascual H. Perazzo and Tauseef I. Choudry, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1022-1032.

Principles of Ground-Water Protection, David W. Miller, (Irrigation and Drainage: Saving a Threatened Resource-in Search of Solutions, Ted Engman, ed., 1992), p86-91.

Statistical Decision Analysis for Interception Wells, Hewa A. Wijedasa and Marian W. Kemblowski, (Irrigation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), pl16-

Taming Environmental Data, Neno Duplancic and Greg-ory Buckle, CE Aug. 92, p56-58.

ory Buckle, CE Aug. 92, p56-58.

Tapping Shallow Groundwater with Horizontal Wells, Brian J. Boman and Donald R. Justice, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p45-50.

Type Curves for a Slug Test in an Infinitely or Seminfinitely Thick Aquiler, Gary R. Chirlin, (Symposium on Ground Water, Gerard P. Lennon, ed. and Shakrokh Rouhani, ed., 1991), p169-174.

Use of D.C. Resistivity to Man Seline Ground Water.

Use of D-C Resistivity to Map Saline Ground Water, Christina L. Stamos, Steven K. Predmore and Adel A. R. Zohdy, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p80-85.

Wetlands ASCE Backs Revised Wetlands Manual From EPA, NE

ASCE Backs REVISED Webands Assured Supply to a Closed Jan. 92, p2.
Assessing the Reliability of the Water Supply to a Closed Basin Wetlands, John C. Tracy and James K. Koelliker, (Water Resources Panning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p445-450.

mad Karamouz, ed., 1992), p445-450.

Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A. Evans and Robert Blama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-335.

Chemical-Constituent Load Removal Efficiency of an Urban Detention Pond/Wetlands System in the Denver Metropolitan Area, Colorado, James R. Kunkel, Timothy D. Steele, Ben Urbonas and Jay Carlson, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p352-357.

Creating Wetlands, Laurence J. Purcell and Thomas D.

Creating Wetlands, Laurence J. Purcell and Thomas D. Johnson, CE Aug. 92, p36-37.

Johnson, CE Aug. 92, p36-37.

Design Considerations for Small Artificial Islands in Franks Tract, California, Craig H. Everts, Vedat Demirel, Russell H. Boudreau, Emy T. Carpenter and Richard Dornbelm. (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p779-793.

Distribution of Wetland Hydrologic Parameters, Misganaw Demissie and Abdul Khan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p470-475.

Engineering Aspects of Wetland Design, Donald F. Hayes and Michael R. Palermo, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p344-349.

Evaluating the Hydrologic Functions of Wetlands, Abiola A. Akanbi and Misganaw Demissie, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487.
Evolving Mitigation Requirements for Port Development, William K. Fehring, Mark Easley and David C. Carpenter, (Ports '92, David Torseth, ed., 1992), p203-213.

The Greening of Greens, R. Todd Borden, CE Oct. 92,

Hydrologic Assessment for Riparian Restoration Projects, Douglas Hamilton, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p624-629.

1992), po.24-0.29.
Hydrologic Methods for Mitigating and Remediating Wetlands in Industrial Development, W. J. Rabe, Jr. and J. K. Virmani, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p488-

493. One-Dimensional River Flow Simulation with Particular Consideration of Ecology and Environment, E. Ritter-bach, M. Schröder and G. Rouvé, (Hybraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jenning, ed. and Nani G. Bhowmik, ed., 1992), p1142-1147.

ed., 1992), p1142-1147.
An Overview: Wetland Restoration, Protection, and Establishment by Beneficially Using Dredged Material, Mary C. Landin, Thomas R. Patin and Hollis H. Allen, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p114-118.
Savannah International Airport Environmentally Minded Stormwater Master Planning, James A. Harned, Elliot Silverston and Mark Easley, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361.
Trends in Streamllow Due to Wetland Drainage, Abdul

Karamouz, eu., 1992), p356-361. Trends in Streamflow Due to Wetland Drainage, Abdul Khan and Misganaw Demissie, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p476-481.

ed., 1992), p476-481.

Water Quantity and Quality for Irrigated Agriculture and Wetlands, E. P. Chambers and J. C. Guitjens, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), 9431-436.

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, 0-87262-876-0,

920pp.

Wetland Restoration and Creation Guidelines for Mitiga-tion, Mary C. Landin, E. A. Dardeau, Jr. and Jerry L. Miller, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p439-444.

Wetting front

Gravity-Driven Fingering in Unsaturated Fractures, M. J. Nicholl, R. J. Glass and H. A. Nguyen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

by Structure in Horizontal Unsaturated Fractures: Water Entry Through the Surrounding Porous Matrix, R. J. Glass and D. L. Norton, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p717-726.

Analysis of a Wharf for a Container Terminal, Luis Hernández Toca and José A. Arréllaga, (Ports '92, David Torseth, ed., 1992), p228-237.

Batter Piles and the Seismic Performance of Pile-Supported Wharves, W. H. Roth, H. Fong and C. de Rubertis, (*Ports* '92, David Torseth, ed., 1992), p336-

Deep Water Container Wharf & Crane Foundation, John E. Gant, (Ports '92, David Torseth, ed., 1992), p238-

Earthquake Damage Repair and Retrofit of the Seventh St. Terminal Port of Oakland, George C. Fotinos, Ger-ald M. Serventi and Larry L. Scheibel, (*Ports '92*, David Torseth, ed., 1992), 9429-442.

Gate Maritime Wharf and Intermodal Facility, Viswanath K. Kumar, William L. Allen and Thomas A. Mantia, (Ports '92, David Torseth, ed., 1992), p43-57.

Historic Seawalls of the Boston Harbor, Massachusetts Region: Evolution, Construction and Repair, David B. Vine and Peter S. Rosen, (*Ports '92*, David Torseth, ed., 1992), p849-867.

Long Piles Driven for New Orleans Superwharf, CE July 92, p21.

Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, Allen M. Yourman, Jr., Matthew F. Hunter and Gerald M. Diaz, (Ports '92, David Torseth, ed., 1992), p376-389.

Pier and Wharf for U.S. Navy Homeport, Everett, Arn-finn Rusten, Robert L. Wallace, Dennis Biddick and Dan S. Wong, (Ports '92, David Torseth, ed., 1992),

p616-629.

polo-0.29.

Pile Driving: Can it Cause Slope Movement? D. G. Anderson, R. E. Riker and B. P. Erickson, (Ports '92, David Torseth, ed., 1992), p350-363.

Pile Lateral Load Test in the Port of Los Angeles, Matthew F. Hunter, Allen M. Yourman, Gerald M. Diaz and Hsueh-Hsin Chu, (Ports '92, David Torseth, ed., 1992), p322-335.

Pile Toward Computer (1992), p322-335. Ports '92, 2 vols., David Torseth, ed., 1992, 0-87262-874-4, 1212pp.

Proposed Seismic Design Method for Piers and Wharves, Robert E. Harn and Bankim C. Mallick, (Ports '92, David Torseth, ed., 1992), p403-417. Seismic Guidelines Impact Los Angeles Wharf Design, CE June 92, p28.

CE June 92, ps. Seismic Repair at Seventh Street Marine Terminal, John A. Egan, Robert F. Hayden, Larry L. Scheibel, Mahmut Otus and Gerald M. Serventi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p867-878.
Upgrading Today's Terminals for Tomorrow's Needs, Bradley P. Erickson, Thomas J. McCollough and Alexander Surko, Jr., (Ports '92, David Torseth, ed., 1992), p802-814.

Stochastic Response of a Caster-Mounted System, Mi-chael A. Moser and Wilfred D. Iwan, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p316-319.

## White noise

Analytical Methods for the Determination of Correla-tions and Spectra of Nonlinear System Response, R. Valery Roy and Pol D. Spanos, (Probabilistic Mechan-ics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p412-415.

Exact Nonstationary Response of a Sliding Rigid Struc-ture to a Modulated White Noise Base Excitation, Marc P. Mignolet and Guangvuu W. Fan, (Probabilis-tic Mechanics and Structural and Geotechnical Reliabil-ity, Y. K. Lin, ed., 1992), p408-411.

Nonstationary Response of Structures with Closely Spaced Frequencies, Kangming Xu and Takeru Igusa, EM July 92, p1387-1405.

Reliability Analysis of Degrading Elasto-Plastic Oscilla-tors, Igor Rychlik and Mircea Grigoriu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p304-307.

Truncation of Infinite Hierarchy for Hysteretic Systems, George Tsiatas and Sau-Lon James Hu. (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p416-419.

## Wick drains

Clay Strengthened for Boston Harbor Project, CE Nov. 92, p14.

Plow Capacity Effect on Vertical Drain Performance, R. Robert Goughnour, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p993-1005.

## Width

Deflections of Beams with Varying Rectangular Cross Section, Filippo Romano and Gaetano Zingone, EM Oct. 92, p2128-2134.

Flow Measurement with Rectangular Free Overfall, Vito Ferro, IR Nov./Dec. 92, p956-964.

Wildlife conservation
Florida Students Grin and 'Bear' It, CE June 92, p11.

## Wildlife habitats

Are High and Low Flow Habitat Values Really the Same? Terry Waddle, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p374

379.

Assessing the Reliability of the Water Supply to a Closed Basin Wetlands, John C. Tracy and James K. Koelliker, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p445–450.

Bodkin Island Wetland Restoration Project Design, Jack E. Davis, S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A. Evans and Robert Blama, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350–355.

Habitat Simulation in United States, Britain, and France,

Naramouz, ed., 1992), p.300-353.
Habitat Simulation in United States, Britain, and France, Robert T. Milhous, Ian Johnson, Yves Souchon and Sylvie Valentin, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p362-247.

367.

Is An Instream Flow Need a Beneficial Use? Robert T. Milhous, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p368-373.

Wind
Applications of Viscoelastic Damper to Jointed Structures for Seismic Mitigation, C. S. Tsai and H. H. Lee,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p685-688.
BEST: New Satellie Mission Dedicated to Tropical System Energy Budget, M. Orgeret, AS Jan. 92, p1-11.
Control of Along-Wind Response of Structures by Mass
and Liquid Dampers, Y. L. Xu, B. Samali and K. C. S.
Kwok, EM Jan. 92, p20-39.
Effect of Static Offset on TLP Modeling. C. Oran, EM

Kwok, EM Jan. 92, p.20-39.
Effect of Static Offset on TLP Modeling, C. Oran, EM Jan. 92, p.74-91.
Effects of Wind on Circulation in Los Angeles-Long Beach Harbors, William C. Seabergh and S. Rao Vemulakonda, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p.551-552.

p551-563.

p531-563.

Estimation of Wind Fields for Coastal Modeling, Edward F. Thompson and Zeki Demirbilek, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p564-573.

Macro Wind Parameters for Load Combination, Christopher A. Belk and Richard M. Bennett, ST Sept. 91, p2742-2756.

A Predictive Model of the Currents in Cleveland Bay, Brian King, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p746-758.

Specifying the Offshore Environment, George Z. Forristall, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1-41.

Three-Dimensional Characteristics Model of Wind-Generated Turbulent Flow, Panayis-Fokion Matsoukis and Aristotelis Papadopolis-Dezorzis, EM Aug. 92, p1526-1545.

ind-Induced Response of Structurally Asymmetric High-Rise Buildings, M. Saiful Islam, Bruce Elling-wood and Ross B. Corotis, ST Jan. 92, p207-222.

Working Conditions of Sprinkler to Optimize Applica-tion of Water, José Marl Tarjuelo Martín-Benito, Manuel Valiente Gómez and Juan Lozoya Pardo, IR Nov./Dec. 92, p895-913.

## Wind bracing

Inductive Learning of Wind Bracing Design for Tall Buildings, Mohamad Mustafa and Tomasz Ar-ciszewski, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p190-203.

Wind energy
Fatigue Life Variability and Reliability Analysis of a
Wind Turbine Blade, Paul S. Veers, Herbert J. Sutherland and Thomas D. Ashwill, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p424-427.

A Mars 1 Watt Vortex Wind Energy Machine, Michael Ralston, Christopher Crowley, Ronald Thomson and Owen Gwynne, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-797.

State of the Art in Other Ocean Energy Sources, Richard J. Seymour and Preston Lowrey, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p258-275.

Comparison of Wind Cross-Spectral Data with Models, N. P. Jones, A. Jain and R. H. Scanlan, (*Probabilistic Mechanics and Structural and Geotechnical Reliability*, Y. K. Lin, ed., 1992), p288-291.

Control of Along-Wind Response of Structures by Mass and Liquid Dampers, Y. L. Xu, B. Samali and K. C. S. Kwok, EM Jan. 92, p20-39.

Coupled Vertical and Horizontal Galloping, Kathleen F. Jones, EM Jan. 92, p92-107.

Stimates of Extreme Wind Distribution Tails, J. A. Lechner, S. D. Leigh and E. Simiu, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.276-279.

K. Lin, 60., 1992.), p210-219.
Experiments with Wind Effects on Pavement Runoff, Joseph R. Reed, David F. Kibler and George Krallis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933.

Frequency Domain Optimal Control of Wind-Excited Buildings, J. Suhardjo, B. F. Spencer, Jr. and A. Kareem, EM Dec. 92, p2463-2481.

The Landfall of Hurricane Hugo, Billy L. Edge, Ben L. Sill and Orville T. Magoon, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p988-993.

Modeling Nearshore Currents in the Vicinity of the Endi-cott Causeway, Alaska, Peter Hamilton, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p227-239.

Craig Swanson, ed., 1992), p227-239.

Modeling Tidal and Wind Driven Circulation in Sarasota and Tampa Bay, S. J. Peene, Y. P. Sheng and S. H. Houston, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p357-369.

Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, Ove Ditlevsen, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p292-295.

Y. K. Lin, ed., 1992), p292-293.

Oceanographic Influences on Oil Spill Movement in the Arabian Gulf, S. Venkatesh and T. S. Murty, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p108-113.

Panel Calls for National Wind Engineering Program, CE

Dec. 92, p18.

Port of Portland's Berth 601 Floating Dock, Elmer W. Ozolin and Walter R. Haynes, (Ports '92, David Torseth, ed., 1992), p150-163.

Probabilistic Description of Buffeting Response of Long-Span Bridges, Friedrich J. Wall and Christian G. Buch-er, EM Dec. 92, p2401-2420.

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, Friedrich J. Wall and Christian G. Bucher, EM Dec. 92, p2421-2441.

Sampling Errors in U. S. Extreme Wind Records, Jon A. Peterka, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p280-

Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, Kwang-W, You, Lie-Yauw Cey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, [Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p453-465.

Tide- and Wind-Driven Flushing of Boston Harbor, Mas-sachusetts, Richard P. Signell, (Estuarine and Coasta Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p594-606.

Wind Cross-Spectrum Effects on Long-Span Bridges, N. P. Jones, A. Jain and R. H. Scanlan, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p63-66.

ed., 1992, pos-60.
Wind Effect on Oblique Motion of Two Bodies in a Uniform Flow, Allen T. Chwang and Ching-Jer Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p353-356.

Wind loads

Digital Simulation of Wind Load Effects, Ahsan Kareem and Yousun Li, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p284-287.

p.284-287.
Estimating Uplift Capacity of Light Steel Roof System, R. A. LaBoube, ST Mar. 92, p.848-852.
Finite Element Large Deflection Analysis of Cylindrical Shells with Different Types of Cutouts, Sukhvarsh Jerath and Steven R. Porter, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.912-915.

1992, p912-915.
Incorporating Load Sharing in Shear Wall Design of Light-Frame Structures, Bohumil Kasal and Robert J. Leicht, ST Dec. 92, p3350-3361.
Integrated Physical Model for Cylindrical Shells, Demetres Briassoulis, ST Aug. 92, p2168-2185.
Macro Wind Parameters for Load Combination, Christopher A. Belk and Richard M. Bennett, ST Sept. 91, p2742-2756.
Probing the Golden Gate, Mark A. Ketchum and Al Hel-

p2742-2756.

Probing the Golden Gate, Mark A. Ketchum and Al Heldermon, CE June 91, p42-45.

Response Statistics of Tension Leg Platforms Under Wind Loads, Jun Zhao and Ahsan Kareem, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p921-933.

Uplift Capacity of Z-Purlins, Roger A. LaBoube, ST Apr. 91, p1159-1166.

Wind Effects on Base-Isolated Structures. Via Chan and

91, p.1139-1109 Wind Effects on Base-Isolated Structures, Yu Chen and Goodarz Ahmadi, EM Aug. 92, p.1708-1727. Wind Loads on Buildings with Sawtooth Roofs, Patrick J. Saathoff and Theodore Stathopoulos, ST Feb. 92,

p429-446.
Wind Pressures on Buildings with Mullions, Theodore Stathopoulos and Xiwu Zhu, ST Aug. 90, p2272-2291.

Wind tunnel models
Wind Pressures on Buildings with Mullions, Theodore
Stathopoulos and Xiwu Zhu, ST Aug. 90, p2272-2291.

Wind tunnel test
Wind Loads on Buildings with Sawtooth Roofs, Patrick J.
Saathoff and Theodore Stathopoulos, ST Feb. 92, p429-446.

p429-446.
Wind velocity
Estimates of Extreme Wind Distribution Tails, J. A.
Lechner, S. D. Leigh and E. Simiu, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), p276-279.
Finite Element-Based Flutter Analysis of CableSuspended Bridges, Ahmad Namini, Pedro Albrecht
and Harold Bosch, ST June 92, p1509-1526.
Sampling Errors in U. S. Extreme Wind Records, Jon A
Peterka, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), p280283.

Wind Effect on Oblique Motion of Two Bodies in a Uniform Flow, Allen T. Chwang and Ching-Jer Huang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p353-356.

Wind waves
Field Performance and Analysis of Steep Riprap, Guy
Lefebvre, Karol Rohan, Mahrez Ben Belfadhel and
Oscar Dascal, GT Sept. 92, p1431-1448.
Gravel Equilibrium Beach Design for Arresting Shore
Erosion at Flathead Lake, Montana, Steven L. Da
Costa, Joseph L. Scott and David P. Simpson, (Coastal
Engineering Practice '92, Steven A. Hughes, ed., 1992),
p154-169.
Robust Annyosob to Wom. B.

Robust Approach to Wave Runup Calculation, Todd L. Walton, Jr., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p879-891.

Spectral and Statistical Characteristics of Wind Waves Off Canary Islands, Germán Rodríguez Rodríguez, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p622-636.

Taylor-Galerkin Method for Wind Wave Propagation, H. S. Chen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p87-90.

Defects in Aluminum Windows and Impact on Dust and Air Infiltration, Osama E. K. Daoud, CF Feb. 92, p12-33.

Masonry Wall and Window System Leakage Investigation for University Building, John Frauenhoffer, CF May 92, p107-115.

winter
Loading of Nutrients to Groundwater From High Source
Areas During the Winter Period, Paul D. Robillard and
Michael F. Walter, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
6232-639. p573-578.

Wire mesh

Potential Gains Through Welded-Wire Fabric Reinforce-ment, Leonhard E. Bernold and Peter Chang, CO June 92, p244-257.

Wire rope Free-Bending Fatigue Life Estimation of Cables at Points of Fixity, Mohammed Raoof, EM Sept. 92, p1747-

Wire Recovery Length in Suspension Bridge Cable, Mo-hammed Raoof and Yu Ping Huang, ST Dec. 92, p3255-3267.

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Ahmad, Shuaib H.

Mechanical Properties of High Performance Concretes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Paul Zia, Mike Lem-ing and M. R. Hansen, p864-867

see Zia, Paul, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p984-987

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Bank Erosion Study of the Nile River at Bani Mazar, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with M. M. Gasser, p816-821

Observations on Flow Around Bridge Piers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Nallamuthu Rajaratnam, p834-839

Use of Rubber Tires in Highway Construction, (Utiliza-tion of Waste Materials in Civil Engineering Construc-tion, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with C. W. Lovell, p166-181

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see Saha, Pabitra K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1059-1062

Ahmed, Rashid H.

Ahmed, Rusann H.
Crop Classification and Area Estimation Using Airborne
Multispectral Video/Radiometer Remote Sensing, (Irrigation and Drainage: Saving a Threatened Resource—
In Search of Solutions, Ted Engman, ed., 1992), with
Christopher M. U. Neale, p323-328

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Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p474-480
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Ahokas, Henry

Ahokas, Henry
Site Investigation Equipment Developed by Teollisuuden
Voima Oy, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Antii Ohberg, Heikki
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Absan, A. K. M. Quamrul
Three-Dimensional Eulerian-Lagrangian Transport
Model, (Estuarine and Coastal Modeling, Malcolm L.
Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed.,
Ralph Cheng, ed. and Craig Swanson, ed., 1992), with
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Aida, Tadayoshi Vibration Control of Beams by Beam-Type Dynamic Vi-bration Absorbers, with Susumu Toda, Norio Ogawa and Yasuo Imada, EM Feb. 92, p248-258

Aidala, James A.

Aldala, James A. Hydrodynamic Forces and Evolution of a Nearshore Berm at South Padre Island, Texas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Neil T. McLellan and Cheryl E. Burke, p1234-1239

Aldanpää, Jan-Olov
Modeling the Chaotic Behavior in Simple Shear Granular
Flows, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), with Hayley H.
Shen and Ram Gupta, p1031-1034

Alken, Richard J.

The DOE Office of Environmental Restoration and Waste Management Comprehensive Integrated Planning Process, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, with Cyril W. Draffin, Jr. and Karl T. Pflock, p1555-1558

Airth, G. L.

A PC-Based Discrete Event Simulation Model of the Civilian Radioactive Waste Management System, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. W. Nehls and D. S. Joy, p1317-1323

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Design Discharge for Urban Stormwater Drainage, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Bennings, ed. and Nani G. Bhowmik, ed., 1992), p713-718
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see Suryanarayana, Seshadri, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p778-783

Akanbi, Abiola A.

Akanbi, Abiola A.

Evaluating the Hydrologic Functions of Wetlands, (Hydralic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Misganaw Demissie, p482-487

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Experimental Photoelastic Analysis of Tunnels Containing Cracks, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with S. S. Abdel Salam, M. H. El Haddad and Gouda A. Mohamed, p276-279

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Alariaa, Vahid Behavior of Thermal Wedges in Oscillating Reservoir Flow: A Case Investigation, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Neil Sutherland and Ming Shiao, p501-506

Density Currents Entering Lakes and Reservoirs, with Gerhard H. Jirka, Richard A. Denton, Marc C. John-son and Heinz G. Stefan, HY Nov. 92, p1464-1489

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Engineering Answers to Groundwater Impact Questions Using a Geographic Information System (GIS), (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Albert N. Williamson, p505-510

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Aldrich, Harl P., Jr.
Specialty Certification: A View in Opposition, CE Apr. 92, po

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Alexander, John A.

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Alexander, S. see Cassaro, M. A., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballan-tyne, ed., 1992), p29-42

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Alexandridis, A.

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Al-Gadhib, Ali H.

Comparative Evaluation of Plasticity Theories Against Tension-Torsion Test at Finite Strain, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Kerry S. Havner, p236-239

Comparative Evaluation of Plasticity Theories against Tension-Torsion Test at Finite Strain, with Kerry S. Havner, EM Oct. 92, p2104-2126

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An Evaluation Study of Modified Mohr-Coulomb and Cap Models, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Sahel N. Abduljauwad, p717-720.

see Abduljauwad, Sahel N., EM Mar. 92, p620-637

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Al-Homoud, Azm S.

Probabilistic Evaluation of Bearing Capacity of Shallow Foundations, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p352-355

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Ali, Abdalla Elsadig Electronic Theodolites: Comparison Test, SU Feb. 91,

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Al-Ibrahim, Abdulla All
Water Use in Saudi Arabia: Problems and Policy Implications, WR May/June 90, p375-388
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Utilization of Carbide Lime Waste in Cement Mortar

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Alkire, Bernard D. Seasonal Soil Strength by Spectral Analysis of Surface Waves, CR Mar. 92, p22-38

Allan, C. J.

Canadian High-Level Radioactive Waste Management System Issues, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with B. R. Gray and P. D. Stevens-Guille, pl 1-17

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Physical Mechanisms Contributing to the Episodic Gas
Release from Hanford Tank 241-SY-101, (High Level
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Allen, C. R.

see Sherard, J. L., (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p204-266

Allen, Carlton C.

Allen, Carlton C.
Lunar Oxygen—The Reduction of Glass by Hydrogen,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with David S. McKay and Richard
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Sintering of Lunar Glass and Basalt, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),
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Allen, Daniel D.

Strength and Fracture of Glass in the Lunar Environ-ment, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Sein Sture, ed. and Russell J. Miller, ed., 1992), with W. Howard Poisi and Brian D. Fabes, p1232-1239

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Allen, Jeffrey C.

RCC Dam Construction—A Contractor's View, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p214-226

Allen, L. Niel

Economical and Statistical Based On-Farm Irrigation Scheduling, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p146-151

Allen, Linda

Issues in Human Resources: Managing Talent in the 21st Century, with Joseph Sewards, ME Oct. 92, p340-345

llen, Richard G.

2.D Evaporation and Root Extraction in an FEM, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Wig-dan I. Ahmad, p189-196

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anniard Reference Evapotranspiration Calculations:
REF-ET, (Irrigation and Drainage: Saving a Threat-ened Resource—In Search of Solutions, Ted Engman, ed., 1992), p140-145

Allen, Robert H.
Expert Systems for Civil Engineers: Knowledge Representation, 1992, 0-87262-892-2, 305pp.

Knowledge Representation: An Overview, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p.1-14
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Alliche, A.

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Allison, Tim

Anison, Illand Amenities and the Location of Industrial Activity, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Frank Calzonetti, p587-592.

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Allton, J. H.

Icon-Based Concept for Exploring Rover Autonomy, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Damian Lyons, p2400-2411
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1992), p.213-223
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Utilization of Carbide Lime Waste in Asphaltic Concrete
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The Design of Landfill Slopes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1232-1243

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Low-Cycle Fatigue Prediction for Ramberg-Osgood Type
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Variations in Measured Resilient Modulus of Asphalt Mixes, with Jamal A. Almudaiheem, MT Nov. 92, p343-352

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Alrahabi, Basem
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New Technique to Evaluate the Surface Degradation of
Cementaneous Matrix, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), with Kazunori
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ein, Micha

Ameia, Michael
DYNLETI: Network Model for Tidal Inlet Dynamics,
(Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph
Cheng, ed. and Craig Swanson, ed., 1992), with Nicholas C. Kraus, p644-656

American Society of Civil Engineers, Publications Division ASCE Annual Combined Index—1991, 1992, 0-87262-886-8, 1036pp. Transactions of the American Society of Civil Engi-neers—1991, vol. 156, 1992, 0-87262-883-3, 694pp.

Ames, Arlo L.
see Robinson, Allen C., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p519-526

Amin, Navinchandra

Amin, Navischaedra Dynamic Analysis of Sliding Seismic Isolators, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, od., 1992), with Anoop Mokha, Stanley Low and Victor Zayas, p320-323

Amir, Joram M. disc. (of Bearing Capacity of Auger-cast Piles in Sand, by William J. Neely, GT Feb. 91, p331-345), GT June 92, p977-978

Amirkhanian, S. N. see Juang, C. H., TE Sept./Oct. 92, p686-699

Amirkhanian, Serji N. L. Sept. T. Ct. 92, p886-699

Amirkhanian, Serji N. L. Sept. Sept. System for Equipment Selection for Earth-Moving Operations, with Nancy J. Baker, CO June 92, p318-331

Amirtharajah, Appiah
see Studstill, Anne, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), 5526-531

MINEMAN, D. J.

Method for Relating Impacts with Yielding and Unyielding Targets, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2255-2259

Ammon, Dieter

Controlled Braking on Uneven Roads, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p65-68

Numerical Study of Soil Anisotropy, EM Jan. 92, p211-

see Lu, Ning, GT Apr. 92, p628-634

Annyiotos, A. S.

Fluid Dynamics at the Carotid Bifurcation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with D. P. Giddens, S. A. Jones, S. Glagov and C. K. Zarins, p844-847

Andersen, C. M.

see Noor, Ahmed K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883

Andersen, Donald A.
Civil Engineering Capstone Design Course, El July 92, p279-283

Andersland, O. B. see Al-Khafaji, A. W. N., GT Jan. 92, p148-153

Anderson, Aubrey L. see Orsi, Thomas H., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p968-982

Anderson, Clayton L. see Blaisdell, Fred W., HY Mar. 91, p303-323

Anderson, D. G.
Pile Driving: Can it Cause Slope Movement?, (Ports '92, David Torseth, ed., 1992), with R. E. Riker and B. P. Erickson, p350-363

Estation, p530-363 Seismic Response of Landfill Slopes, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with B. Hushmand and G. R. Martin, p973-3989

Anderson, Dave see Lee, Gordon K. F., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009

Anderson, David C. see Elsbury, Bill R., GT Nov. 90, p1641-1660

See Eisoury, Bill R., G. Fact. A., J. Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1112-1125
see Riker, Richard E., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p292-309

Anderson, E. see Spaulding, M. L., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p157-174

Swanson, ed., [992), p157-174

Anderson, E. B.
Forecasting the Space-Time Stability of Radioactive Waste Isolation in Salt Formations, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. I. Karelin, A. S. Krivokhatsiy and V. G. Savonenkov, p2114-2121

Materials Testing Aspects of the Problem of the Chernobyl NPP 4th Unit's High-Level Radioactive Products Burial, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with B. E. Burakov and E. M. Pasukhin, p2395-2398

Anderson, E. L. see Spaulding, M. L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175

Anderson, G. K.
pH Control in Anaerobic Treatment of Industrial Wastewater, with G. Yang, EE July/Aug. 92, p551-567

see Morris, Gregory L., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p837-842

Anderson, Kenneth O.
see Khogali, Walaa E. I., (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), pl 53-167

Anderson, Loren R. see Bergado, Dennes T., GT July 92, p1047-1063

Andersoa, Mark
The Application of Dynamic Modeling in the Nonde-structive Testing of Roads and Airfields, (Road and Airport Pavement Response Monitoring Systems, Vin-cent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p321-335

Anderson, Marsha
Corridor Planning and Traffic Assessment: Small Sites
and Neighborhoods, (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Paaswell, ed., Nagui
Rouphail, ed. and T. C. Sutaria, ed., 1992), with Diane
Simpson-Colebank, p190-194

Simpon-Corona, p. 190-194

Anderson, R. H.

Decision Analysis Model for Well Rehabilitation and Groundwater Development, Moses Lake, Washington, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with W. J. Roberds and D. Banton, p537-542

Anderson, Robert S.
see McDonald, Richard R., (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p748-751

Anderson, Scott A.
see Sitar, Nicholas, (Stability and Performance of Slopes
and Embankments II, Raymond B. Seed, ed. and
Ross W. Boulanger, ed., 1992), p834-849

Andersson, J.
Lessons Learned from the Performance Assessment of SKI Project-90, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with K. Andersson, S. Norrby and S. Wingefors, p.2109-2113

Andersson, Johan
Achievements Within the International INTRAVAL Project, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Kristina Skagius, pl414-1420
see Nicholson, Thomas J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl437-1441

Anderson, K.
see Andersson, J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2109-2113

Anderton, Gary Lee see Ahlrich, Randolph Charles, (Materials: Performance and Prevention of Deficiencies and Failures, Thom-as D. White, ed., 1992), p39-52

Andrassy, Chris see Kaihatu, James M., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p615-631

Andrew, Richard D. Restricting Rockfalls, CE Oct. 92, p66-67

Andrews, Elizabeth S.
Multilayered, Priority-Based Simulation of Conjunctive
Facilities, with Francis I. Chung and Jay R. Lund, WR
Jan./Feb. 92, p32-53

Andrews, John F. see Barnett, Michael W., EE Nov./Dec. 92, p949-963

Andryszak, Robert J.

Nitrogen Removal at Baltimore's Back River WWTP, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Amarjit S. Sokhey, Jaswant S. Dhupar and Manu A. Patel, p617-622

Ang, Alfredo H-S. see Ang, George L., EM June 92, p1146-1163

Ang, George L.
Optimal Importance-Sampling Density Estimator, with
Alfredo H-S. Ang and Wilson H. Tang, EM June 92,

Angelotti, David
Bargain Package for Smaller Structures, CC July 92, p1-9

Angus, I. G.

Parallelism, Object Oriented Programming Methods, Portable Software and C++, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p506-513

Anmangandla, Sharath see Melching, Charles S., EE Sept./Oct. 92, p791-805

Annandale, George W.

On Deciding Between the Use of Engineering Standards and Risk Analysis, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p.219-235 nsari, Farhad

Nondestructive Testing of Concrete Elements and Struc-tures, with Stein Sture, ed., 1992, 0-87262-887-6, 235pp.

233pp. Real-Time Condition Monitoring of Concrete Structures by Embedded Optical Fibers, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p49-59

Ansari, N. I. see Oasim, S. R., EE May/June 92, p432-437

Anspach, Marie E. see Wolfe, Robert E., El Jan. 92, p38-48

Anthony, B. A.
Hybrid Grouting Techdniques to Stabilize a Weakly Cemented Sandstone at King Talal Dam, Jordan, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with M. P. Bruen, R. R. Mann and Z. Alem, p577-587

Anthony, Joseph G.
see Galbraith, William L., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p161-167

Anthony, Ronald W. see Bodig, Jozsef, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p82-69

Anton, Walter F. Seattle Plays It Safe, with Ronald M. Polivka and Laurel Harrington, CE Aug. 92, p38-40

Antonelli, D.
see Novara, M., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p1579-1590

Antoniou, P. see Hamilton, J., EE Jan./Feb. 92, p38-55

Antoun, Tarabay H.
see Curran, Donald R., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
p369-372

Aoki, Tetsuhiko

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Apicella, Guy A.

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tolakis, G. E.

see Hong, Y., (Risk-Based Decision Making in Water Re-sources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p331-337

ed. and Eugene Z. Stakhiv, ed., 1992), p331-337

Appelbaum, Stuart J.

The Challenge of Kissimmee River Restoration, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p696-701

Proposed Development of South Central Florida Hydrologic Ecosystem Model, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p707-711

April, Gary

see Lu, Zhaodong, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p418-429

Ara, Samia see Siddharthan, Raj, ST Feb. 92, p469-487

Aragüés, Ramón see Oullez, Dolores, IR May/June 92, p343-359

Arasan, V. Thamizh

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Arata, Alan W.

Multiple Booster Spaceports, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2035-2043

Arbelaez, Maria C.

see Poran, Chaim J., (Ports '92, David Torseth, ed., 1992), p390-402

see Khasnabis, S., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p983-990

Arciszewski, Tomasz

Arciszewski, Tomasz.
Knowledge Acquisition in Civil Engineering, with Lewis A. Rossman, ed., 1992, 0.87262-864-7, 232pp.
Machine Learning in Knowledge Acquisition, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), with Wojciech Ziarko, p50-68
see Mustafa, Mohamad, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p190-203

Argiris, Leo

Engineering a Monument, Evoking a Nightmare, with Khosrow Namdar and Trevor Adams, CE Feb. 92, p48-51

Armacost, Robert L.

Armacos, Robert L.

Customer Requirements in Industrialized Housing.

(Housing America in the Twenty-First Century,
Mehmet Inan, ed., 1992), with Paul J. Componation,
Michael A. Mullens and William W. Swart, p48-57

Armer, Larry D.
Stabilizing Drop Structure by Drainage Modifications, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p39-44

Armstrong, T. W.

see Johnson, Charles L., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-1841

Arnesen, Tore O. Surplus Promotes Price Competition, CE Dec. 92, p6

Arnold, Charles H.

see La Penta, Bruce A., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p436-448

ld, Terrence E.

Arnold, Terresce E.
RCC Dam Design Concepts Versus Construction Conditions for Stagecoach Dam, (Rollar Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Daniel L. Johnson, p.291-307
RCC Test Specimen Preparation—Developments Toward a Standard Method, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Theodore B. Feldsher and Kenneth D. Hansen, p.341-357

Arockinsamy, M.
Vibration Control of Beams with Embedded Smart Composite Material, with P. S. Neelakanta and G. Sreenivasan, AS Oct. 92, p492-498

see Issa, M. A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p260-263

Aron, Gert
Adaptation of Horton and SCS Infiltration Equations to
Complex Storms, IR Mar/Apr, 92, p275-284
Fractal Concept Used in Time-of-Concentration Estimates, with James E. Ball and Thomas A. Smith, IR
Sept./Oct. 91, p635-641
disc: George V. Sabol, IR Nov/Dec. 92, p1004-

IR Nov./Dec. 92, p1006

Stability Problems in Stream Water Profile Computa-tions, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Arthur C. Miller, p846-851

see Kibler, David F., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p725-728

Aronson, Michael N.
see Colman, Steven B., (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Paaswell, ed.,
Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992),
p118-122

Arora, Pankaj A.

Afora, Pankaj A. The Development and Application of an Expert System to Determine the Probability of Pesticide Leaching, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with William F. McTernan, p451-456

Arréllaga, José A. see Hernández Toca, Luis, (Ports '92, David Torseth, ed., 1992), p228-237

Arsenault, Richard J.

Fracture Toughness of DMMC, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p228-231

Arslan, Awadis B. see Weltz, Mark A., IR Sept./Oct. 92, p776-790

Arul Jayachandran, S. see Vaidyanathan, C. V., (disc), ST Nov. 90, p3236-3241

Arumala, J. O.

Water Penetration in Laterally Loaded Brick-Wall Panels, MT Nov. 92, p432-436

Arvind, C. R.

see Srinivasan, C. N., (disc), ST July 91, p2088-2098 see Srinivasan, C. N., (disc), ST Oct. 91, p2988-3007

Determining Causes for Taste and Odor in Bandar Ab-bas's Drinking Water, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with A. R. Mesdaghinia, p610-616

sano, Hidekazu

Asano, Hidekari Corrosion Lifetime Assessment for Candidate Materials of Geological Disposal Overpack for High-Level Nucle-ar Waste Canisters—Perspective of R&D in Japan, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), with Hisao Wakamatsu and Masatsune Akashi, p1658-1669

ASCE Coastal Engineering Technical Committee Role of the Coastal Engineer in Civil Engineering Prac-tice, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p918-934

ASCE Committee on Cable-Stayed Bridges, (Man-Chung

ASCE Committee on Cable-Stayed Bridges, (Faure Sange, Chun.)
Guidelines for Design of Cable-Stayed Bridges, 1992, 0-87262-900-7, 70pp.

ASCE Committee on Fire Protection, Structural Division, American Society of Civil Engineers, (E. L. Schaffer, chmn.)

Structural Fire Protection (M&R No. 78), 1992, 0-87262-888-4, 260pp.

ASCE Ports and Harbors Task Committee (Paper Pre-pared by Fred A. Klancaik, Walter D. Ritchie, and David B. Vine)

Draft Chapter 1—Planning and Design Guidelines for Small Craft Harbors—Planning and Environmental Considerations, (Ports '92, David Torseth, ed., 1992),

ASCE Ports and Harbors Task Committee—Marinas 2000 (Paper Prepared by William F. Baird, Monica A. Chasten, Eanio DeCurits, C. Michael Donoghue, Jeff Lilycrop, John W. Gaythwaite, and E. Douglas Seth-ness, Jr.)

Draft Chapter 2—Planning and Design Guidelines for Small Craft Harbors—Entrance Design and Breakwat-ers, (Ports '92, David Torseth, ed., 1992), p1001-1069

ASCE Ports and Harbors Task Committee (Paper Pre-pared by Paul H. Sorensen, C. Allen Wortley, Frederic G. Hunt, Bruce O. Tobiasson, Kenneth M. Childs, Jr., and Charles G. Forster)

Draft Chapter 3—Planning and Design Guidelines for Small Craft Harbors—Inner Harbor Structures, (*Ports* '92, David Torseth, ed., 1992), p1070-1151

ASCE Ports and Harbors Task Committee (Paper Pre-pared by Fred A. Klancnik)

Planning and Design Guidelines for Small Craft Harbors, (Ports '92, David Torseth, ed., 1992), p937-938

ASCE Ports and Harbors Task Committee (Paper Pre-pared by Lawrence E. Williams, Fred A. Klancnik, Pa-trick L. Phillips)

Planning and Design Guidelines for Small Craft Harbors—Economics and Finance, (Ports '92, David Torseth, ed., 1992), p1152-1183

ASCE Task Committee on Design Criteria for Composite Structures in Steel and Concrete Commentary on Proposed Specification for Structural Steel Beams with Web Openings (with Design Exam-ple), ST Dec. 92, p3325-3349

Proposed Specification for Structural Steel Beams with Web Openings, ST Dec. 92, p3315-3324

ASCE Task Committee on Geostatistical Techniques in Geohydrology of the Ground Water Hydrology Commit-tee of the ASCE Hydraulics Division

Review of Geostatistics in Geohydrology: I. Basic Concepts, HY May 90, p612-632 disc: Zekâi Şen and Ali Subyani, HY Apr. 92, p638-640 clo: HY Apr. 92, p640-642

ASCE Task Committee on Sea-Level Rise and Its Effects on Bays and Estuaries Effects of Sea-Level Rise on Bays and Estuaries, HY Jan.

92, pl-10

ASCE Task Committee on Sediment Transport and Aquat-ic Habitats, Sedimentation Committee

Sediment and Aquatic Habitat in River Systems, HY May 92, p669-687

On-Off Terminal Ship-to-Rail Transfer, (Ports '92, David Torseth, ed., 1992), p108-120

Shielding and Criticality at the MRS Facility, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Robert G. Eble and James R. Hilley, Jr., p205-

Ashford, Scott A.

Ashford, Scott A.
FS-1.5: Is It Appropriate for Embankment Design?, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Lawrence H. Roth, Sandra L. Madsen and Donald G. Anderson, p1112-1125

Ashkar, Fahim Separation of Skewness: Reality or Regional Artifact?, with Bernard Bobée and Jacques Bernier, HY Mar. 92, p460-475

Sec. (of Recurrence Interval of Geophysical Events, by Hugo A. Loaiciga and Miguel A. Mariño, WR May/ June 91, p367-382) with Taha B. M. J. Ouarda and Nassir El-Jabi, WR July/Aug. 92, p470-472

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Aslani, Farhang

Stitch Spacing and End Fixity in Seismic-Resistant Boxed Angle Braces, with Subhash C. Goel, ST Oct. 92, p2872-2889

Aswathanarayana, P. A. see Chacko, Baby, EY Dec. 92, p164-179

Vipulanandan, C., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p700-711

Athanasopoulos, George A.
disc. (of Dynamic Response of Sand Reinforced with
Randomly Distributed Fibers, by Mohamad H. Maher
and Richard D. Woods, GT July 90, p1116-1131), GT Mar. 92, p513-515

Atsunori, Mlyamura
Reliability Analysis of Plates with Initial Deflection by
Entropy Model, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),
with Kohama Yoshiro and Takada Toyofumi, p559-

Attaway, C. R.

Attaway, C. R.

Alternative Cask Maintenance Facility Concepts, an Update and Reassessment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with L. G. Medley, R. B. Pope, L. B. Shappert and A. C. Williamson, p1336-1342

Attrep, Moses, Jr.
see Curtis, David, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p338-344

Atwater, Richard disc. (of Conjunctive Use—Advantages, Constraints, and Examples, by Jack J. Coe, IR May/June 90, p427-443), IR Mar/Apr. 92, p333-334

Relationships Between Error Estimation and Adaptive Computations in Strain Localization, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1932), with B. Tie, p280-283

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Audibert, J. M. E.

Reserve Capacity Design Method (RCDM) for Deepwater Piled Foundations, with J. L. Mueller and S. R. Bamford, WW Jan./Feb. 92, p32-42

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Augusti, Giuliaso
Optimal Allocation of Resources in Repair and Maintenance of Bridge Structures, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), with Antonio Borri and Marcello Ciampoli,
p1-4

Austin, Barbara

see Fieber, Julie, (Transportation Planning and Air Quali-ty, Roger L. Wayson, ed., 1992), p255-570

tin, M. A.

Assins, M. A.
Solid Modeling of RC Beams: 1. Data Structures and Algorithms, with J. L. Preston, CP Oct. 92, p389-403
see Hudson, C. A., (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p671-678

see Preston, J. L., CP Oct. 92, p404-416
see Voon, B. K., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p778-

Austin, Paula see Gil, April VanCamp, (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1819-1825

Austia, Robert B.

Adhesives and Structural Plastics, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p560-571

Bridge Deck Distress and Repairs, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p325-338

Austin, Teresa

From Sludge to Brokered Biosolids, CE Aug. 92, p32-35 Landfill-Cover Conflict, CE Dec. 92, p70-71 The OCEA Awards of Merit, CE July 92, p50-53

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The Roads Ahead, CE Apr. 92, p54-57
disc: Marcia J. Simon, CE June 92, p37
U.S. Sludge Digesters: From Pancakes to Eggs, CE Oct.
92, p36-39

VOCs: The New Effluent, CE Mar. 92, p42-45 disc: James A. Greiner, CE July 92, p42

Auvinet, Gabriel

Asymes, Courses Stress Transfer Within Granular Geomaterials, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p159-162 see Rossa, Olivier, GT Aug. 92, p1241-1246

Avent, R. Richard

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Averett, Daniel F.

see Francingues, Norman R., Jr., (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p994-999

Averill, W. A. see Mishra, B., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677

Avery, Jim

see Grasso, Chris, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453

Avey, Charline M.
see Bakken, J. Darrell, (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p703-711

Aw. V. B.

see Koo, T. K., SU May 92, p43-62

Awal, Abu S. M. Abdul

Creep Recovery of Prepacked Aggregate Concrete, MT Aug. 92, p320-325

Awumah, Kofi

Awumah, Koff
Energy Efficient Pump Station Operation with a Pump
Switching Constraint, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
with Kevin E. Lansey, p604-609
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Inducer Compounds in the Enricher-Reactor Process, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Chwen-Jeng Tzeng, Simlin Lau and Michael K. Stenstrom, p468-473
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See Tzeng, Chwen-Jeng, (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p67-72

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Granular Flow on a Bumpy Inclined Chute, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1024-1027

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see Roberts, John P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236

Badruzzamaa, A. B. M.
Assessing Culll) Speciation and Transport in the New
York Bight, (Estuarine and Coastal Modeling, Malcolm
L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg,
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Study of Groins on the Middle Rio Grande, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Cassie C. Klumpp, p822-

see Kiumpp, Cassie C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p828-833

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Baker, Cynthia J. A Novel Tracer Injector for Surface Water Studies, (Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Deborah J. Mossman, p410-415

see Mossman, Deborah J., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p110-115

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Turner, Richard C., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p104-107

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Computing in Civil Engineering: Current Trends and Future Directions, with Glenn J. Rix, El Apr. 92, p139-

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disc. (of Wheel Loads from Highway Bridge Strains: Field Studies, by Tommy Hung Tin Chan and Colin O'Connor, ST July 90, p1751-1771) with John R. Bil-ling and Akhilesh C. Agarwal, ST June 92, p1706-1708

Bakken, J. Darrell
Integration of AM/FM/GIS with MODELING/DESIGN
on Large Utility PC Network, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), with Charline M. Avey, p703-711

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Utilization of Fly Ash in High Volumes for Low Strength
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Balasundaram, V.

Impact of Present Data Validation Practices on Risk As-sessment of Hazardous Waste Sites, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with C. Minch and N. Shashidhara, p567-574

Computer Support for Water Quality Management in San Diego Bay, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), with G. T. Orlob, p176-181

Bale, Michael G.

Spent Fuel Characteristics Potentially Relevant to Repository Design Assessment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Thomas A. Thornton, pl 16-121

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see Giese, G. L., (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p607-619

see Strickland, A. G., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1130-1135

Balint, Stephen W.

Design Loads for Sloshing in TLP Pontoons Tanks, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), 99-113

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Ball, James E.

see Aron, Gert, IR Sept./Oct. 91, p635-641

Ballantyne, Donald B.
Lifeline Earthquake Engineering in the Central and Eastern U.S., Technical Council on Lifeline Earthquake Engineering Monograph No. 5, 1992, 0-87262-902-3,
200pp.

Ballard, Robert F., Jr.

see McGee, Richard G., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1030-1035

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Ballivy, G.

Effectiveness of Injected Cement Grout under Harsh Environmental Conditions, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with J. C. Colin and T. Mnif, p588-600

Rehabilitation of Cocnrete Dams: Laboratory Simulation of Cracking and Injectability, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with K. Saleh, T. Mnif, J. Maniez, L. M. Landry and M. Nadeau, p614-

Bally, René Jacques disc. (of Variability in Compaction Control, by Iraj Noorany, GT July 90, p1132-1136), GT Mar. 92, p515-517

Balog, George G.

Advantages of Installing Influent Fine Screens at a Large Wastewater Treatment Plant, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Dave L. Montgomery, Amarjit Sokhey, Manu A. Patel and Norman R. Prima, p287-290

Baltimore City Recycling Program—A Case History, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1932), with Kenneth J. Strong and Ellen L. Kobler,

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Enlimore City's 1989 Sludge Crisis—A Case History, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Robert T. Mohr and Nicholas H. Frankos, p256-261

Baltimore City's Geographical Information Data Base for the NPDES Stormwater Program, (Environmental En-gineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Wil-liam P. Stack, Kenneth T. Beit and Nathan J. Beil, 409, 633 p498-503

Baltimore Waste Water Infrastructure a Health Plan (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Gary A. Wyatt and Edward Serp,

ed., 1992 p429-432

pa(5)-432 Baltimore's Industrial Pretreatment Program has Successfully Reduced the Concentrations of Priority Pollutants Entering the Back River Waste Water Treatment Plant. (Environmental Engineering: Saving a Threatment Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Ralph O. Cullison, III., 1145.156.

Liberty Reservoir Stormwater Retrofit Project, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with William P. Stack, Kenneth T. Belt and Prakash Mistry, p346-351

Phosphorus Removal by Automatic Backwash Filters at Back River WWTP, (Environmental Engineering: Sa-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Manu A. Patel, Thomas N. Lash and Christian Davies-Venn, p24-29

see Schulte, G. Raymond, (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p303-308

Bamberger, Judith Ann

Experimental Characterization of Jet Forces on Waste Tank Components, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with James M. Bates and E. Dale Waters, p628-635

Bamford, S. R.

see Audibert, J. M. E., WW Jan./Feb. 92, p32-42

Connecticut's Wellhead Protection Program, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p92-97

see Banan, M. R., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p571-574

Banan, M. R.

Parameter Estimation in Complex Linear Structures, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with M. Banan and K. D. Hjelmstad, p571-574

Banasik, K.

Prediction of Sedimentgraph from a Small Watershed in Poland in a Changing Environment, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with D. E. Wood-ward, p493-498

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Optimum Geometries for Pier-Type Airport Terminals, with S. C. Wirasinghe, TE Mar./Apr. 92, p187-206

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Banerjee, Kashi see Rabosky, Joseph G., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p388-393

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Bank, Lawrence C.

Experimental Investigation of Bending and Twisting Coupling in Thin-Walled Composite Beams, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Steven J. Smith, p884-887

Ninuawcka, ed., 1992), with Steven J. Smith, p884-887 Tests of Full-Size Pultruded FRP Grating Reinforced Concrete Bridge Decks, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Zuhan Xi and Eric Munley, p618-631

see Mosallam, Ayman S., ST July 92, p1937-1954

Banks, Glynn

see Teeter, Allen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017

Banks, M. K.

Banks, M. K. Atrazine Biodegradation in Biological GAC Columns, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with C. M. Huang, p516-519
Characterization of a Heavy Metal Contaminated Site, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with B. A. Hetrick, A. P. Schwab, K. G. Shetty, I. Abdelsaheb and G. Fleming, p463-467

Bankston, Cheryl D.

Tethers and Their Role in the Space Exploration Initia-tive, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with John A. Gilbert and Dennis R. Wingo, p897-908

Permeability of Roller Compacted Concrete, with Michel Pigeon, Jaques Marchand and Jean Boisvert, MT Feb. 92, p27-40

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see Anderson, R. H., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p537-542

Oblique Wave Action, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with José M. Berenguer, p718-732

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Baptista, António M.

Nas, Assonio M. Oddinara M., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p280-291

Barbé, D. E.

A Stochastic Water Quality Model for Urban Watersheds, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with J. F. Cruise and X. Mo, p791-796

Barbors, Michael J.

Air Emissions Testing of Air Toxics at WWTPs, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), 979-85

ardakci, Tevfik

Bardaket, Ievha.
Diffusion of Carbon Dioxide and Iodine Through Yucca Mountain Tuffs—Effects of Temperature and Moisture Content, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Franklin G. King and Aject Singh, p1946-1952

Bardet, J. P.

Bareet, J. P.
Hypoplastic Model for Sands, EM Sept. 90, p1973-1994
disc: Jian Chu, EM Apr. 92, p844-845
clo: EM Apr. 92, p846
Sbear-Band Analysis in Idealized Granular Material, with
J. Proubet, EM Feb. 92, p397-415

Bardossy, A. see Bogardi, I., GT Oct. 90, p1502-1520

Barghouthi, Amjad F. Active Earth Pressure on Walls With Base Projection, GT Oct. 90, pl 570-1575 disc: Venanzio R. Greco, GT May 92, p825-827

Barkdoll, Brian D.

Modeling Instantaneous Residential Demands in Municipal Water Distribution Systems, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Steven G. Buchberger, p62-67

Barker, M. G.

Shakedown Limit State of Compact Steel Girder Bridges, with T. V. Galambos, ST Apr. 92, p986-998

Design Considerations for Multi-Wheel Aircraft, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), with Carlos R. Gonzalez, p49-63

Bariaz, Morton A.
see El-azer, William E., (Utilization of Waste Materials in
Civil Engineering Construction, Hilary I. Inyang,
ed. and Kenneth L. Bergeson, ed., 1992), p193-201

erformance-Assessment Comparisons for a Repository Containing LWR Spent Fuel or Partitioned/ Transmuted Nuclear Waste, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with W. W. L. Lee, pl 397-1403 Performance-Ass

Yucca Mountain Project Total-System Performance As-sessment Preliminary Analyses: Overview, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), with H. A. Dockery, p874-881

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see Nathan, Mark P., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-

18. H. M.

see Winandy, J. E., MT Aug. 92, p240-251

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Expert System for Anaerobic-Digestion-Process Opera-tion, with John F. Andrews, EE Nov./Dec. 92, p949-963

Barnow, Barbara
The Dialogue of Players on the Development Stage, (Site
Impact Traffic Assessment: Problems and Solutions,
Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C.
Sutaria, ed., 1992), p200-204

Barnwell, Thomas O., Jr. see Lovell, Jeffrey S., (disc), EE Sept./Oct. 90, p988-990

Barone, r. S.
Estimation of Chloride Diffusion Coefficient and Tortu-osity Factor for Mudstone, with R. K. Rowe and R. M. Quigley, GT July 92, p1031-1046

Barr, Douglas W. Système International Yes, Newton No, CE Sept. 92, p6

Barraclough, I. M. see Cooper, J. R., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p237-242

Barrett, Edward G.
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Barrett, P. R.
Thermal-Structural Analysis Methods for RCC Dams, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with H. Foadi-an, R. J. James and Y. R. Rashid, p407-422

Barrett, Peter R.

Barrett, Peter R.
A Spacer Grid Hysteretic Model for the Structural Analysis of Spent Fuel Assemblies Under Impact: SAND91-2528C, TTC-1114, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with 1. Kurkchubasche and Kevin D. Seager, p2249-2254
see Seager, Kevin D., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1765-1769

Barrett-McDuniels, June see George, Thomas S., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p640-645

Barroeta, N. A. see Koehn, Enno, El Apr. 91, p133-149

Bartel, Warren

see Borgman, Leon, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p585-606

Barthelemy, Robert R.

The National Aero-Space Plane Program—A Revolutionary Concept, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2382-2391

Bartolini, Paolo

Definition of a Weighting Function for Rainfall in Aggre-gated Rainfall-Runoff Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Juan B. Valdés, p537-542

Barton, F. W. see Salzar, R. S., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1323-1334

Barton, W. B.
see Wolfe, B. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1701-1710

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Baryla, Jean-Michel

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see Swamee, Prabhata K., IR Jan./Feb. 92, p61-73

sart, John P.

Low Frequency Astronomy from Lunar Orbit, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Jack O. Burns, p1913-1924

Basco, David R.
Basco, David R.
Sandbridge Virginia Oceanfront Seawall Arbitration
Hearing: Some Lessons Learned for Coastal Engineers,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), with Robert A. Dolan and Carter Sinclair,
p1003-1020

Basham, K. D.

Three-Dimensional Fracture Process Zone Detection in Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Y. C. Jean and K. P. Chong, p401-404

asham, Kim D.

Quantitative Stereology of Concrete Microcracking, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p123-126

Bashaw, Erin K.

Bashaw, Eria B.
Solid Waste Travel Demand Model Using GIS and Simulation for Evaluating Site Impacts, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with P. A. Koushki, p185-189

Baskin, Kenneth P.

Managing the High Level Waste Nuclear Regulatory Commission Licensing Process, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p691-694

Evaluation and Control of Collapsible Soils, with Erdil R. Tuncer, GT Oct. 92, p1491-1504

see McAlarmey, Mona E., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p960-963

Bass, Gregory P.
South Jetty Scour Hole Stabilization, Ocean City, Maryland, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), with Edward T. Fulford, p583-597

ett, Britt D.

Model to Design Diffused Aeration System for BNR, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Dipankar Sen, J. Gage Muckleroy and Jaswant Dhupar, p18-23

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Macromodeling of Complex Composites, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwocki, ed., 1992), p1071-1074

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Bates, James M.

see Bamberger, Judith Ann, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p628-635

Bates, John K.

Bates, John K.

Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p934-942

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Bathurst, Richard J.
Finite Element Analysis of a Geogrid Reinforced Soil
Wall, (Grouting, Soil Improvement and Geosynthetics,
Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), with Rajagopal Karpurapu and Peter
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Fault Stress Analysis for the Yucca Mountain Site Characterization Project, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with M. P. Hardy, R. Goodrich and M. Lin, p2267-2277

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Data Abstraction in Engineering Software Development, with Daniel R. Rehak, CP July 92, p282-301 see Sharma, Suresh K., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p639-646

Baumana, Duane D.

The Monitoring of Water Conservation Behavior and Attitudes in Southern California, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), with Eva Opitz and Diane Egly, p117-134

Baumann, E. W.
see Coleman, C. J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561

Baumgardner, Robert H.
Overview of Permeable Bases, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p275-287

Baumli, George R.
The 1991 Revolution in Water Management, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p322-327

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Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Direct Tensile Test: Stability and Bifurcation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Luigi Cedolin, p357-360 Drying and Cracking Effects in Box-Girder Bridge Segment, with Vladimir Kristek and Jan L. Vitek, ST Jan. 92, p305-321

Analysis of Strain-Softening Damage under Monotonic and Cyclic Loading, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Jolko Ożbolt and Rolf Eligehausen, p490-

disc. (of Crack Band Based Model for FEM Analysis of Concrete Structures, by Grzegorz Gajer and Peter F. Dux, ST June 90, p1696-1714), ST Mar. 92, p867

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Ben, R. G.

Re-Qualification of Offshore Platforms, (Civil Engineer-ing in the Oceans V, Robert T. Hudspeth, ed., 1992), p427-443

lea, Robert G.

Pile Capacity for Axial Cyclic Loadings, GT Jan. 92, p34-50

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see Espejo, J. M., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p18-24

Beck, J. L.

Updating Dynamic Models and Their Associated Uncertainties for Structural Systems, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with L. S. Katafygiotis, p681-684

see Papadimitriou, K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p572-575

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see de Vroeg, J. H., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p90-103

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Beckett, James P.

INFO: An Information Framework for Facility Opera-tors, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Victor E. Sanvido, p57-64

Beckham, Harvey C.

Implementation of Material Requirements in Specifica-tions, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), with John R. Smith, p428-433

Bécus, Georges A.

Some Modeling and Analysis Techniques for Wave Propagation in Random Media, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p377-380

Bédard, Claude Formulation of a Knowledge-Base for Building Design Simulation, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Mathi Ravi, pl129-1138

Bedford, Keith

see Spaulding, Malcolm L., ed., Estuarine and Coastal Modeling

Bedford, Keith W. see Yen, Chieh-Cheng J., (Estuarine and Coastal Model-ing, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p140-148

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Basile G. Rabbat, Kenneth F. Dunker and John S. Dick, ST Apr. 92, p1151-1153

Simulation of Reservoir Operation Using Smart Reservoirs, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p606-613

attern Formation and Time-Dependence in Flowing Sand, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with G. W. Baxter, p1028-1030

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Beike, Dieter
Feasibility Study of Petroleum Development in the Ross Sea, Antarctica, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p341-355

Beil, Nathan J.

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Keynote Presentation, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p7-13

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Construction Automation Work Classification, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p500-505
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Applying Lessons from Extreme Environments to Solve Problems on Earth and in Space, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadel, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),

Bell, Larry S.

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see Balog, George G., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503

Belytschko, T.

Adaptive and Parallel Methods for Nonlinear Solid Mechanics, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with L. P. Bindeman, H. Y. Chiang, E. J. Plaskacz and I. S. Yeh, p.27-41

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Wright, UP Mar. 92, p24-40
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and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p929-933

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Benaroya, H.

Design and Construction Considerations for Lunar Outpost, with M. Ettouney, AS July 92, p261-273

Design Codes for Lunar Structures, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with M. Ettouney, p1-12

Tensile-Integrity Structural Concepts for the Lunar Surface, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with M. Ettouney, p276-283

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Framework for Evaluation of Lunar Base Structural Concepts, with Mohammed Ettouney, AS Apr. 92, p187-198

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An Overview of Segmented Offshore/Headland Breakwater Projects Constructed by the Buffalo District,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), p170-188

Bender, Thomas J.
Field Trip—Cleveland East Breakwater Inspection, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magon, ed. and William F. Baird, ed., 1992), p270-272

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Beneconal, Rahim F.
Improvements on Quantifying Pass-By Trips for Shopping Centers, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p47-51
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enjamin, Bennie L. he Caisson Solution, with Thomas L. Weber and Jose A. Ramos, CE Dec. 92, p44-47

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Forecasting Instabilities in Groundwater Parameters,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Miguel A. Mariño,

Beamokrane, B.
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of Deficiencies and Failures, Thomas D. White, ed.,
1992), p606-617

Supervision and Automatic Control of Robotic Systems in Nuclear Environments, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with K. Leinemann, p966-973

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Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), pl 10-115

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Bennett, P. C.

Beanett, P. C.
Perspectives on the Science Advisor Program at Sandia
National Laboratories, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), with R. B. Heath, A.
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see Drotning, William D., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p974-979

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ed., 1992), p495-498
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Nonisothermal Viscoplasticity, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Maciej P. Bieniek, p244-247

Towards Earning Public Trust and Confidence Through Accountability, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), with William Morgan and Deirdre Williamson, p1917-1920

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Benson, Paul E.

Summary of Roundtable Discussion on Modeling Issues, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p276-278

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A New Concrete Armor Unit for Breakwaters: The "Beta Block", (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), with Vicente S. Naverac and José Manuel de la Peña, p667-678

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Bergado, Dennes T.

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Numerical Solution of the Transient Fokker-Planck Equation: The Movie, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with B. F. Spencer, Jr., p519-522 see McFarland, D. M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p576-579

see Pang. S. T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p820-823

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Water Availability and Water Demand Study for the Citandup River Basin, West and Central Java, Indonesia,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Ed A. Toms, p328-331

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Preliminary Design of an Underground Lunar Mine, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.

Miller, ed., 1992), with Brad R. Blair, p1171-1182

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Deruner, Elisabeth
Instrumentation for Vehicle Mobility Testing in the Frost
Effects Research Facility, (Road and Airport Pavement
Response Monitoring Systems, Vincent C. Janoo, ed.
and Robert A. Eaton, ed., 1992), with Sally Shoop,
p12-26

Berman, Neil A.
Chlorination/Decklorination and Post Aeration Key Operating Parameters, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Manu A. Patel and Jack P. McClinton, Jr., p623-627

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Bernard, Robert S.

Three-Dimensional Incompressible Flow Calculations with MacCormack's Method, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Michael L. Schneider, p.219-224

ernardini, Alberto

Bernardial, Alberto
Fuzzy Measures in the Knowledge Based Diagnosis of
Seismic Vulnerability of Masonry Buildings, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Roberto Gori and
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e Hill, Sine, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p33-40

A Regulatory Perspective on Design and Performance Re-quirements for Engineered Systems in High-Level Waste, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 9813-821

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Cables and Cranes for a Flexible Lunar Transportation
System, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p308-319
Computer-Controlled Brick Masonry, with Frank R. Altobelli and Henry Taylor, CP Apr. 92, p147-160

Indigenous Planetary Construction Material Through Soil Modification, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Yasuyuki Horie and Mark B. Boslough, p493-503
Potential Gains Through Welded-Wire Fabric Reinforcement, with Peter Chang, CO June 92, p244-257
Principles of Control for Robotic Excavation, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1401-1412
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see Goodings, Deborah J., AS Jan. 92, p44-58
see Sailim, Md., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodino, ed. and Jeff R. Wright, ed., 1992), p872-879

Bernstein, Harvey M. Tort Liability: Limiting U.S. Innovation, CE Nov. 92, p6

Berry, Richard M.
Settlement, Structural Failure, and In-place Repair of Above Ground Storage Tanks, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Robert P. Buhrow, p240-251

ert, C. W.

Dynamic Stability of Composite-Material Circular Cylin-drical Shells with Orthogonal Stiffeners, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with C. D. Kim and V. Birman,

ppopulation of the problem for Orthotropic Straight Tubes of Finite Length, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. Libai, p872-875

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ment Program Committee, 1992), p1855-1859

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Tunnel Boring Machine Applications—Yucca Mountain Exploratory Studies Facility, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Richard McDonald and Robert S. Saunders, p1521-

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disc. (of Explicit Calculation of Pipe-Network Parameters, by Paul F. Boulos and Don J. Wood, HY Nov. 90, p1329-1349, HY July 92, p1060-1062

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Bhowmik, Nani G.

Hydraulic and Geomorphic Classification of the Upper Mississippi River System: Pilot Study of Three Pools, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Renjie Xia, p666-671

Return Flows in Large Rivers Associated with Navigation Traffic, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with B. S. Mazumder and Ta Wei Soong, p760-765

see Jennings, Marshall, ed., Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions

see Soong, Ta Wei, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p672-676

imgara, Rayomand R.

Bnumgara, Rayonana R.
Remediation of VOCs in Water Using UV/Oxidation,
(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), with Chen-yu Yen, D. Randolph Grubbs
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Bielle, Paul

Genesis: The Creation of a Lunar Base, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Nathan Nottke and Seishi Suzuki, p13-24

see Hernried, Alan G., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p924-927

Bibler, N. E.

see Coleman, C. J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p557-561

Bickley, John A.

Simulated Field Trials of Non-Destructive Concrete Test Methods for Highway Structures, (Nondestructive Tessing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with Paul Read, p162-170

Bicknell, Jill C.

Implementation of the NPDES Storm Water Regulations by Municipalities in the San Francisco Bay Area, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Sachiko Itagaki, p451-456

see Rusten, Arnfinn, (Ports '92, David Torseth, ed., 1992), p616-629

au, Daniel

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Out-of-Plane Strengths of Steel Beams, with G. Chen and N. S. Trahair, ST Aug. 92, p1987-2003

Bill, Herbert L., Jr.

disc. (of Response of Reinforced Concrete Elements to Severe Impulsive Loads, by T. Krauthammer, S. Shahriar and H. M. Shanaa, ST Apr. 90, p1061-1079) with Mostafiz R. Chowdhury, ST Feb. 92, p625-626

Bille, Matthew A.

The Affordable Space Platform: The STS External Tank, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p945-956

Billing, John R. see Bakht, Baidar, (disc), ST July 90, p1751-1771

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see Sridharan, A., GT Aug. 91, p1174-1190

Binger, Wilson V. Qualifications Not a Matter of Degrees (ltr), CE Jan. 92,

disc. (of Regarding Nature as Raw or Cooked, by Margar-et N. Maxey, CE Oct. 91, p61-63), CE Feb. 92, p30-31

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Biolzi, Luigi disc. (of Cyclic Behavior of End-Plate Moment Connec-tions, by Keh-Chyuan Tsai and Egor P. Popov, ST Nov. 90, p2917-2930), ST Mar. 92, p874-877

Birch, Mary I

see Roberts, John P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236

Bircher, Keith
see Bhumgara, Rayomand R., (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p98-

Bird, Donald M.

see Holland, Peter J., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-

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disc. (of Advanced Fabrication and Erection Techniques for Long Suspension Bridge Cables, by Minoru Matsuzaki, Chihiko Uchikawa and Takeshi Mitamura, CO Mar. 90, p112-129), CO Mar. 92, p200-205

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Birrell, N. D.

Internationalization of Engineering Professions, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p983-1005

Birt, C. S.

Minimizing the Risk and Impact of Tanker Accidents, (Ports '92, David Torseth, ed., 1992), with A. J. Jordan,

Bisarnsin, Tanongsak see Love, Ethan A., (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p577-584

Designing Reinforced Rock, with Stephen J. Klein and Thomas A. Lang, CE Jan. 92, p64-67

Public Attitudes About Radioactive Waste, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), pl-3

Planning and Budgeting for FAA Facilities and Equipment, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p239-243

Bishop, Walter A., Jr.

Wastewater under Home Plate, with John S. Fraser, CE Oct. 92, p61-63

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see Cilli, Leonard, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p75-79

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njornove, stemar disc. (of Compression Tests of Cold-Formed Steel Col-umns, by C. C. Weng and Teoman Pekoz, ST May 90, p1230-1246) with J. Crews, D. S. Ellifritt, S. J. Errera, N. R. Iwankiw, D. L. Johnson, J. N. Macadam, T. Pekoz, R. M. Schuster and D. R. Sherman, ST Apr. 92, p1146-1148

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Black, Kenneth C.

see Craig, Paul M., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p61-71

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disc. (of Bin-Wall Failure Caused by Eccentric Discharge of Free-Flowing Grain, by R. A. Bucklin, S. A. Thomp-son and I. J. Ross, ST Nov. 90, p3175-3190), ST May 92, p1440-1442

Blacklock, James R.
Earthquake Hazard Investigative Procedures for Central
United States Waterworks, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p1-15

Blaha, David W.

Blaha, David W. see Turek. James G., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p112-117 see Yucel, Oner, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p358-363

Lunar Surface Mine Feasibility Study, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1092-1103

see Berk, Scott B., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1171-1182

Blair, John A.

Using Seals to Control Flow at Yucca Mountain, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Dean Stucker and Prasanna Kumar, p1196-1199

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Blaisdell, Fred W.
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disc: M. Shafai-Bajestan and M. L. Albertson, HY
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clo: HY Oct. 92, p1452-1453
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Impact Basin, by Charles E. Rice and Kem C. Kadavy,
HY July 91, p929-933), HY July 92, p1076-1077

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see Chastanet, Joseph D., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p265-274

see Davis, Jack E., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-355

Blanchard, Maxwell B.
U.S. Department of Energy Issue Resolution Process, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Michael D. Voegele and Miguel A. Lugo, p1062-1066

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Moisture and Suction in Sanitary Landfills in Semiarid

Areas, with J. M. Ball and J. J. Blight, EE Nov./Dec.
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Design Implications of Measured Pressures and Strains in Silos, ST Oct. 92, p2729-2742

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Blowers, Robert A.

Pre-Compression of Concrete Breasting Dolphins Solves Construction Problem, (Ports '92, David Torseth, ed., 1992), with Alexander Matlin and Antoni J. Zelechowski, p602-615

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Modeling

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with Boris Galperin and Donald J. O'Connor, HY Aug.
92, p1119-1134
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Blumenthal, Michael
Scrap Tires Used in Rubber-Modified Asphalt Pavement
and Civil Engineering Applications, (Utilization of
Waste Materials in Civil Engineering Construction,
Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed.,
1992), with Joseph L. Zelibor, p182-192

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see Lillycrop, Linda S., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p412-424

Boc, Stanley J., Jr.

Coastal Processes and Engineering on a Micronesian Fringing Reef, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with William J. Reynold and Jasmina M. Dobinchick, p285-302

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see Kim, Keu W., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhowmik, ed., 1992), p500

nazo, Lynn Marie ersesian, Gilbert K., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p554-570

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Bodge, Kevin R.
Bodge, Kevin R.
Beach Nourishment with Aragonite and Tuned Structures, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p73-89
disc. (of Is It Good Business to Be a Citizen Engineer?, by
Brent A. Campbell, CE Oct. 91, p54-55), CE Feb. 92,
p32

Bodig, Jozsef
International Harmonization of Reliability-Based Timber
Engineering Design Codes, (Probabilistic Mechanics
and Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), with Michael Caldwell and Ronald W. Anthony, p82-86

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see Wittwer, C. S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271
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Bogardi, I. Reliability Model for Soil Liner: Post Construction, with W. E. Kelly and A. Bardossy, GT Oct. 90, pl 502-1520

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1992), p293-298

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shoff, David R.

Modeling Horizontally Nail-Laminated Beams, ST May 92, p1393-1406

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Boles, Walter W.

Enhancing Decision Analysis Techniques for Lunar Base
Construction Research, (Engineering, Construction,
and Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), with David
B. Ashley, p341-349

Performance-Based Evaluation of Lunar Base Construc-tion Equipment and Methods, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p332-

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Bolton, John M.

disc. (of Records Management in Engineering Firms, by Dennis O. Hamilton, ME Oct. 91, p346-356), ME Oct. 92, p400-402

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n. Brian J.

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nasia, Joseph Yang, David W., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p632-645

Bonasia, Joseph J. see Bobroski, Ted, (Ports '92, David Torseth, ed., 1992), p506-519

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Boaner, James S. Transport of Low-Level Radioactive Soil at Deep-Ocean Disposal Site, with Carlton D. Hunt, John F. Paul and Victor J. Bierman, Jr., EE Jan./Feb. 92, p101-119

Boaner, Verson
HEC-2 Water Surface Profiles Program, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p866-871

Bouneson, James A. Change Intervals and Lost Time at Single-Point Urban Interchanges, TE Sept./Oct. 92, p631-650

Estimating Peak Flows from Small Agricultural Water-sheds, with A. Ramachandra Rao, IR Jan./Feb. 92, p122-137

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Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p953-958

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Booth, Pleter N.
Multiuser Sites for Contaminated Sediment Disposal,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Kimberly A. Henson, p96-101

Boothby, Thomas E.
Stability of Masonry Piers and Arches, with Colin B.
Brown, EM Feb. 92, p367-383
Stability of Systems of Rigid Bodies by Bounding Theorems, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p904-907

Borchardt, David E.

see Richardson, John A., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1883-1888

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see O'Connor, R. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p574-581

Bord, Richard J

see O'Connor, Robert E., (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p67-77

len, R. Todd

Borden, R. Todd The Greening of Greens, CE Oct. 92, p55-57

The Greening of Greens, CE Oct. 92, p53-57

Borden, Roy H.

Grouting, Soil Improvement and Geosynthetics, Geotechnical Special Publication No. 30, 2 vols, with Robert O. Holtz, ed. and Ilan Juran, ed., 1992, 0-87262-865-5, 1480pp.
see Gabr, Mohammed A., GT Dec. 90, p1831-1850 see Gularte, Francis B., Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p423-435 see Krizek, Raymond J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p688-699

see Krizek, Raymond J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724
see Liao, Hung-Jiun, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p676-687

Boresi, Arthur P. see Wang, Dong Q., EM July 92, p1357-1364

see Wang, Dong Q., EM July 92, p1357-1364

Borgman, Leon

Empirical Simulation of Future Hurricane Storm Histories as a Tool in Engineering and Economic Analysis,

(Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), with Martin Miller, Lee Butler and Robin Reinhard, p42-65

Sea Floor Wave-Induced Water Kinematics for Design of Pipeline, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), with Robert Hudspeth, p444-466

The SIMBAT Software Package for Stochastic Interpolation of Ocean Wave Kinematics as an Aid in the Engineering Design of Large Floating Structures, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with David Shields, Robert Zueck and Warren Bartel, p585-606

Borgman, Leon E.

Borgman, Leon E. see Scheffner, Norman W., WW July/Aug. 92, p337-351

Borja, Roualdo I.

Free Boundary, Fluid Flow, and Seepage Forces in Excavations, GT Jan. 92, p125-146

vations, C1 Jan. 92, p125-146
Generalized Creep and Stress Relaxation Model for Clays, GT Nov. 92, p1765-1786
Movement of Slopes During Rapid and Slow Drawdown, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Suni S. Kishnani, p404-413

on the Bifurcation of Elasto-Plastic Crystals During Multiple Slip, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Jon R. Wren, p284-287

Borkowski, Adam

see Fleischmann, Nikolaus, (Computing in Civil Engi-neering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p402-49.

ann, Noel E.

Bornama, Note E.
Scour Downstream of Grade-Control Structures, with Pierre Y. Julien, HY May 91, p579-594
disc: M. Shafai-Bajestan and M. L. Albertson, HY
July 92, p1066-1068
disc: George K. Cotton, HY July 92, p1068-1070
disc: Siow-Yong Lim, HY July 92, p1070-1072
clo: HY July 92, p1072-1073

Borovetz, Harvey S.

Flow Visualization Studies in the Novacor Left Ventricular Assist System, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Frank Shaffer, Richard Schaub, Laura Lund and John Woodard, p713-716

Borri, Antonio

see Augusti, Giuliano, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4

Borthwick, A. G. L.

Laboratory Study of Oil Slick Subjected to Nearshore Cir-culation, with S. A. Joynes, EE Nov./Dec. 92, p905-922

see Clemmens, A. J., IR July/Aug. 92, p640-644

Boscardin, Marco D.

Building Response to Excavation-Induced Settlement, with Edward J. Cording, GT Jan. 89, p1-21 disc: James D. Geddes, GT Aug. 91, p1276-1278 clo: GT Apr. 92, p636-637

Bosch, Harold

see Namini, Ahmad, ST June 92, p1509-1526

Bosco, B.
see De Paoli, B., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and lian Juran, ed., 1992), p474-485
see De Paoli, B., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and llan Juran, ed., 1992), p486-499

Bosco, C.
Softening and Snap-Through Behavior of Reinforced Elements, with A. Carpinteri, EM Aug. 92, p1564-1577

Bose, Ashim Rule-Based Representation, (Expert Systems for Civil En-gineers: Knowledge Representation, Robert H. Allen, ed., 1992), with Robert H. Allen, p43-59

Boshovea, Jack K.
Criticality Safety and Shielding Design Issues in the Development of a High-Capacity Cask for Truck Transport, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2156-2160

Bosley, Kathryn
see Hess, Kurt, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan
Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p83-94

Boslough, Mark B.
see Bernold, Leonhard E., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p493-503

Bosscher, Peter J.
see Adams, Teresa M., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p582-589

Botha, Jan L. Flow Rates at Signalized Intersections Under Cold Win-ter Conditions, with Thomas R. Kruse, TE May/June 92, p439-450

Botov, N. G. ALWP-67: A Little-Known Big Nuclear Accident, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p2331-2338

Bott, Jacqueliue D. J. see Keaton, Jeffrey R., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p192-204

Bottia, Robert R., Jr.
Model Tests for Expansion of Anaheim Bay Naval Harbor, (Ports '92, David Torseth, ed., 1992), with Dan Muslin, p768-776

azza, Abdelmalek Wei, Meijiu, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p1175-1187

chard, R.

see Leroueil, S., (disc), GT Dec. 90, p1811-1830

Boudreau, Russell H.
Application of Traffic Engineering Concepts to Pleasure
Boat Traffic, (Ports '92, David Torseth, ed., 1992), with
Michael C. Leue and James R. Walker, p.248-262
Santa Barbara Harbor Assessment of Shoaling Frequency,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), with Alan Alcorn and Stephen Fine, p447461

see Everts, Craig H., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p779-793

Boulanger, Ross W.
see Bray, Jonathan D., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p410-417

see Seed, Raymond B., ed., Stability and Performance of Slopes and Embankments II

ulemin, Chérif

Routema, Chern.
A Knowledge Based System with Uncertainty for the Soil, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Daniel Boissier and Jihad Al-Hajjar, p365-368

Boulos, Paul F.

Explicit Calculation of Pipe-Network Parameters, with
Don J. Wood, HY Nov. 90, p1329-1344
disc: Pramod R. Bhave, HY July 92, p1060-1062
clo: HY July 92, p1062-1063

Bouman, S. R. see Vogelzang, C. H., (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p244-260

rnazel, Jean Pierre

see Mazars, Jacky, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p482-485

dimos, La

Bouroalmos, Lampros E. See Goodman, Alvin S., (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p322-330

Bouwer, Herman Reuse Rules, CE July 92, p72-75

wders, John J.

disc. (of Hydraulic Conductivity of Three Landfill Clay Liners, by Mark E. Gordon, Paul M. Huebner and Thomas J. Miargas, GT Aug. 89, p1148-1160), GT Jan. 92, p156-157

Bowen, B. R.

Integrity Testing of Concrete Elements Using Surface Waves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. M. Roesset and K. H. Stokoe, II., p952-955

Bowen, David R.

see Moutal, Harvey P., CE Feb. 92, p66-67

Bowen, James D.

Dredging Contaminated Sediments: A Monitoring Plan for Boston Harbor, (Ports '92, David Torseth, ed., 1992), with Steven H. Wolf and Curtis A. Meininger, p443-455

see Wolf, Steven H., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231

Bowen, Robert B.

Bowen, Robert B.

Improved Performance of Activated Sludge with Addition of Inorganic Solids, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Brian A. Dempsey, p474-479

Metal Hydroxide and Metal Oxide Enhanced Activated Sludge: An Industrial Strength Wastewater Treatment Process, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p646-655

Bowie, Andrew J.

see Kuhnle, Roger A., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p741-746

Bowman, Stephen M.
ORIGNATE: PC Input Processor for ORIGEN-S, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p88-92

Bownds, John M. see Railsback, Steven F., EE Mar./Apr. 90, p361-375

Development of a Demonstration Program for a Dry Cask-to-Cask Transfer System with Dual Purpose Casks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Robert E. Jones, p2212-2218

see Jones, R. H., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p99-102

Boyd, Millard D.

see Clarke, William J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p626-638

Boyd, Robert Human Habitat Design for the Space Exploration Initia-tive, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Scott Geels, Benton C. Clark and Carolyn Cooley, p25-33

Boyd, Thomas J.
Commute: Infiltration, The Unaddressed Issue, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with T. C. Sutaria, p67-71

Boyd, William A.

Criticality Safety of TRU Storage Arrays at the Waste Iso-lation Pilot Plant, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), with Mark W. Fecteau, p2069-2077

Boyer, Robert E.

International Air Transportation: A New International Airport, 1992. 0-87262-871-X, 284pp.

Boyle, William J.

Boyle, William J.

Quantification of Uncertain Outcomes from Site Characterization: Insights from the ESF-AS, (High Level Radiacoactive Waste Management, High Level Radiactive Waste Management Program Committee, 1992), with David K. Parrish and Phillip C. Beccue, p657-664

Quantifying Uncertainty in Site Characterization, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p216-219

BOSZO, LABS M. Qualitative Evaluation of Preliminary Structural Designs, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Gregory L. Fenves, p89-96

Branksma, John P.

An Economic Evaluation of the Thunder Bay Air Termi-nal Development Strategies, (International Air Trans-portation: A New International Airport, Robert E. Boyer, ed., 1992), with Andrew Schmidt and Peter Friedrichs, p124-147

Traffic Impact Assessment for Snow Disposal Facili-ties—Extended Abstract, (Site Impact Traffic Assess-ment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with lan Lockwood and Juan Salimas, pl 175-179

Brackenbury, P. J.
Disposal of Failed Melters from Defense Waste Vitrifica-tion Facilities, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), with J. King and E. C. Nor-man, p.2381-2386

Bradburn, James H.

Denver International Airport Fabric Roof Design, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), with Horst Berger and Lee Erdman, p192-198

Bradbury, A. P.

Stability of Rock Armour Under Random Wave Attack: Performance of Non-Standard Rock Shapes and Grad-ings, (Durability of Stone for Rubble Mound Breakwat-ers, Orville T. Magoon, ed. and William F. Baird, ed., 1992), with N. W. H. Allsop, p64-81

Bradford, Mark A.

disc. (of Buckling Analysis of Structures Composed of Tapered Members, by Siu Lai Chan, ST July 90, p1893-1906), ST Mar. 92, p868-869

Bradford, Mark Andrew

Analysis of Circular RC Columns for Short- and Long-Term Deformations, with R. Ian Gilbert, ST Mar. 92, p669-683

Composite Beams with Partial Interaction under Sus-tained Loads, with R. Ian Gilbert, ST July 92, p1871-

Distortional Buckling Solutions for Continuous Compos-ite Beams, with Zhi Gao, ST Jan. 92, p73-89

Bradley, Jeffrey B.

Small Stream Classification—A Process Based Approach, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Peter J. Whit-ing, p695-700

Williams, David T., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694

Brady, M. C.

The Role of ORIGEN-S in the Design of Burnup Credit Spent Fuel Casks, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p65-71

Braithwaite, Derek A. see Sato, Chikashi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 298-1310

Branch, K.

A Critical Review of Cooperative Agreements as a Mechanism for State, Tribal, and Local Government Participation in DOE Transportation Programs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with N. Coburn, G. Curtis, J. Holm and S. Smith, p156-160

Brand, Alfred H.

Gabions and Geogrids, CE Sept. 92, p65-67

Brandner, Theresa E.

Leakage Characteristics of the St. Jude Heart Valve, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Yi-Ren Woo, p705-708

Brandon, J. A. see Cremona, C. F., AS Oct. 92, p442-449

Brandon, Thomas L.
Hydrocompression Settlement of Deep Fills, with J. Mi-chael Duncan and William S. Gardner, GT Oct. 90, p1536-1548

1336-1548
dise: Wesley Spang and Scott L. Hardman, GT June 92, p952-954
dise: Daniel Pradel, Gien Raad and Russell G. Harter, GT June 92, p954-955
dise: D. R. Phatak and Yusuf Poonawala, GT June 92, p955
dise: T. J. Pilecki, GT June 92, p956-960
GT June 92, p960-962

Branski, J. M.

see Sibetheros, I. A., HY Oct. 91, p1332-1351

See Street W. See Oswald, George E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p62-63

Bratkovich, Alan

see Washburn, Libe, HY Jan. 92, p38-58

Bratteland, Eivind

see Briggs, Michael J., (Ports '92, David Torseth, ed., 1992), p777-790

Bray, Jonathan D.

Finite Element Analysis in Geotechnical Engineering, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Ross W. Boulanger, Soon Hue Chew and Raymond B. Seed, p410-417

On the Response of Earth Dams Subjected to Earthquake Fault Rupture, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Raymond B. Seed and H. Bolton Seed, p608-624

Braybrooke, Nick

see Feather, Timothy D., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p44-49

see Dorrity, J. Lewis, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p368-

Bredariol, A. W.

Predicting Effects of Subsidence on Landfill Caps, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with J. Larralde, J. P. Martin and C. A. Fiori, p360-364

Breen, John E. see Roberts, Carin L., CE Nov. 92, p48-51

Breitung, Karl

A Criticism of Statistical Methods in Probabilistic Models in Structural Reliability, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p236-239

A. Mathematical Tool Set for SORM Reliability Methods, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p248-251

A Statistical Method for the Reliability of Mechanical Components, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p440-442

see Maes, Marc A., (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p96-99

Brekke, David W.
see Ness, Robert O., Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p617-

Bremner, T. W.
see Holm, T. A., (Materials: Performance and Prevention
of Deficiencies and Failures, Thomas D. White, ed.,
1992), p363-372

Brenner, Asher
Model Study of Jet-Circulated Grit Chamber, with Mordechai H. Diskin, EE Nov./Dec. 91, p782-787
disc: Hasan Z. Sarikaya, EE Nov./Dec. 92, p1009
clo: EE Nov./Dec. 92, p1010-1011

Breaner, Brian
ASG COGO, with Dennis Njuguna, CC Mar. 92, p1,4-6
Glueware, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), with Cynthia Gagnon, p1226-1225
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Brenner, C. E.
see Bucher, C. G., (Probabilistic Mechanics and Structural
and Geotechnical Reliability, Y. K. Lin, ed., 1992),
p132-135

Brenner, Robert D.
Dinner Presentation, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p1-6

Bretscher, Ulrich

Improvement of Flow in Final Settling Tanks, with Pete Krebs and Willi H. Hager, EE May/June 92, p307-321

U.S. Navy Deployable Waterfront Facility, (Ports '92, David Torseth, ed., 1992), with Julio Giannotti and Arturo Calisto, p520-534

Breve, M. A

see Skaggs, R. W., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p19-24

Breysse, D.
Use of Hierarchical Lattices for Predicting the Fluid or
Stress Transfer in Concrete, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), with D. Fokwa and G. Schlatter, p171-174
see Fokwa, D., (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p131-134

Briassoulis, Demetres
Integrated Physical Model for Cylindrical Shells, ST Aug.
92, p2168-2185

Bricks, R. Mark

Removal of Extremely Low Levels of Munitions in a Drinking Water Supply, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Wayne Sharp, p1190-1196

Military Leaders and Civil Engineers—An Air Force Academy Challenge, with K. J. Knox, B. L. Miller and B. D. Bryant, El July 92, p240-249

Three Dimensional Visualization in Support of Yucca Mountain Site Characterization Activities, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p458-461

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Briggs, Brian K.

Design and Maintenance Factors Affecting Application
Uniformity of Low Pressure Center-Pivot Irrigation
Systems, (Irrigation and Drainage: Saving a Theatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), with K. James Fornstrom and Larry Pochop,
p257-262

Briggs, M. J. see Elgar, Steve, WW Jan./Feb. 92, p87-103

See Eigar, Steve, w. Janse 10. 32, portions for Port Up-Barbers Point Harbor: A Unique Solution for Port Up-grade, (Ports '92, David Torseth, ed., 1992), with Eivind Bratteland, p717-790 Comparison of Model and Field Results for Barbers Point Harbor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Linda S. Lillycrop and David D. McCiehee, p387-399

Bright, John K. Responsibility is the Key (ltr), CE Aug. 92, p29-30

Brill, E. Downey, Jr. see Lee, Han-Lin, WR Mar./Apr. 92, p185-204 see Uber, James G., WR May/June 92, p281-294

Brill, Gary T. Retention System Using Compaction Grouting in Clay Soils, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Kenneth E. Darmell, p791-802

Brimhall, J. L.

Bermann, J. L.
see McConnell, P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180

Brimley, W. J. G.
On-Orbit Robotics Assembly and Operations of a Nuclear Mars Transfer System. (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with H. Kleinberg and H. H. Woo, p1413-1422

Brincker, Rune

see Jensen, Jakob Laigaard, EM June 92, p1268-1273

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Britzius, Charles W. disc. (of Dialogue on Political Contributions and Engineering, by William E. Norris, El Jan. 90, p38-41), El Jan. 92, p87-88

Broadhead, B. L.

Broadhead, B. L.
Assessment of Proposed Dose Factor Changes to Shipping Cask Design and Operation, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with C. V. Parks and R. B. Pope, p2174-2181
Preliminary Assessment of the Benfits of Derating a Cask for Increasing AgeBurnup Capability, (High Level Radioactive Waste Management, High Level Radioactive Waste Management, Togram Committee, 1992), with C. V. Parks, D. S. Joy and J. S. Tang, p2182-2189

Brocard, D. N.

see Padmanabhan, M., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633

Brocard, Dominique N.
Groundwater Modeling of Wastewater Management Options, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Angelos Protopapas, p287-292

Bröchner, J.

R&D Cooperation by Swedish Contractors, with B. Grandinson, CO Mar. 92, p3-16

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Broderick, Gregory P.
Stabilizing Compacted Clay Against Chemical Attack, with David E. Daniel, GT Oct. 90, p1549-1567 disc: James L. Post, GT Apr. 92, p659 clo: GT Apr. 92, p659-660

Broderick, Laurie

disc. (of Engineering Women Into the Workplace, by Patti Hinckley, CE Nov. 91, p66-67), CE Mar. 92, p38,40

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Brogan, J. D.

A Microcomputer-Based Model for Identifying Urban and Suburban Roadways with Critical Large Truck Accident Rates, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. W. Cashwell, p432-436

Brookhart, Morris V.

see MacConnell, Gary S., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p394-398

see Shoaf, Stephen R., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p399-404

Brooks, David A.

Experiments with a Terrain-Following Hydrodynamic Model for Cobscook Bay in the Gulf of Maine, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Laurice U. Churchill, p215-226

Brooks, Joan

see Houck, Carl P., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438

Brooks, Mark W.

Broats, Mara W.
Evaluation of Expansive Clay Soils in Tucson, Arizona, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Edward A. Nowatzki, p220-223

Broomhead, David
Shallow Soil Mixing—A Case History, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Brian H. Jasperse, p564-576

Broughton, P.

Broagnoo, F.
Gisc. (of Nonlinear Analysis of Steel Space Structures, by Ram Chandra, D. N. Trikha and Prem Krishna, ST Apr. 90, p898-909) with M. Nygård and T. Hørte, ST May 92, p1424-1427

Brouwer, Robert

see Schuurmans, Wytze, IR May/June 92, p360-369

Brown, B. M.

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Physical and 2-D Computer Models of Skimmer Curtain Effects on Lewiston Reservoir and Outlet Temperatures, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Gus Yates and Perry Johnson, p50f-513

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Recent Progress in American Pinpile Technology, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p765-777

1992, p. 105-71.
Two New Specialty Geotechnical Processes for Slope Stabilization, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1505-1519
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Concrete Surface Treatments—A Selection Guide, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p476-482

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Cause and McChaism of Failure Kettleman Hills Landfill B-19, Phase 1A, (Stability and Performance of Slopes
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Soil Nailing: A Simplified Kinematic Analysis, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992),

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Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p86-91

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Development of a Phase I Prescriptive Reservoir Model, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p667-672

Carlevaro, Fabrizio

Engineering-Econometric Model of Energy Demand, with Jean-Luc Bertholet, Jean-Paul Chaze and Patrick Taffé, EY Aug. 92, p109-121

Carlock, Mark A.

Laboratory Tests of Modal Emissions and Off-Cycle Corrections to FTP-75, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p211-218

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see Edwards, B., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p943-948

Carlson, Jay see Kunkel, James R., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p352-357

Carlstrom, R. F. see Wang, O. S., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p416-420

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Carmack, William J.
Technology Transfer to Developing Countries, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p227-231

Carmichael, A. Dougias State of the Art in Wave Power Recovery, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), with Johannes Falnes, p182-212

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see Everts, Craig H., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p779-793

Carpenter, James W. see Sexton, Donald L., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p374-388

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rreon, Samuel, Jr.
Williams, David T., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p689-694

see Vives, Luis, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p84-

Carriaga, Carlos C.

Model for Determining Optimal Reservoir Releases to Control Downstream Sedimentation Under Uncertainties of Sediment Transport Parameters, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Larry W. Mays, p526-531

Carrick, Jonathan R.
see Huttelmaier, H. Peter, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1116-1126

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Managing and Motivating People on a Joint Venture Pro-ject, ME Oct. 92, p362-366

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see Schmitt, H. H., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-

Carrier, W. David, III. see Gromov, Valery V., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p518-527

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Carsey, J. E.
Vacuum Melting and Mechanical Testing of Simulated Lunar Glasses, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with J. D. Blacic and B. J. Pletka, p1219-1231

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see Fouss, James L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p25

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u, T. M., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p733-749

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Carter, Irevor G.
Integration of Chemical and Cement Grouting Techniques for Controlling Mine Water Inflows through Fractured Ground, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Stephen H. E. Philips and Patrick C. Cochrane, p410-422

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Implementing Uncertainty Treatment in Al Development Environment, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Debbie Liu, p17-20

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Supporting Hydration Calculations for Small- to Large-Scale Seal Tests in Unsaturated Tuff, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. A. Fernandez and J. R. Tyburski, p.2298-2308

see Fernandez, Joseph A., (High Level Radioactive Waste Managemeni, High Level Radioactive Waste Management Program Committee, 1992), p2290-2297

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Data Bases About the Transportation of Radioactive Materials, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with James D. McClure, p427-431

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see Brogan, J. D., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p432-436

Casper, William L.

Crane Raise with Zero Downtime, (Ports '92, David Tor-seth, ed., 1992), with Alex Surko, p749-756

Risk Based Decision Support Model for Water Delivery Systems Subject to Natural Hazards, (Lifeline Earth-quake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1921), with M. J. Cassaro, R. K. Ragade and S. Alexander, p29-42

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see Cassaro, M. A., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballan-tyne, ed., 1992), p29-42

Castelli, Raymond J.
Pile Installation and Testing at Ningbo Port, China,
(Ports '92, David Torseth, ed., 1992), with Alexander
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Analysis of the Georgia Dome Cable Roof, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Matthys P. Levy, p566-573

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Steady-State Strength Analysis of Lower San Fernando
Dam Slide, with Raymond B. Seed, Thomas O. Keller
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disc. (of Uncertainty in Steady-State Liquefaction Evaluation Procedures, by Steven L. Kramer, GT Oct. 89,
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Castro-Montero, A.

Evolution of Damage in Brazilian Test Using Holographic Interferometry, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Z. Jia and S. P. Shah, p612-615

Ja and S. P. Shan, p612-613

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A Semi-Implicit Finite Difference Model for Three-Dimensional Tidal Circulation, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Ralph T., Cheng, p620-631

see Cheng, Ralph T., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p428-429

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Computerized Management Systems for Pavement Networks, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p293-300

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Quality, Roger L. Wayson, ed., 1992), p142-160

Cavacas, Aian Water Quality Management Planning—Bird River Wa-tershed, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Leslie Shoe-maker and Julie Wright, p96-101

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see Weshorst, Paul A., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
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see Weghorst, Paul A., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374

Cartfield, Jeffrey D.
Critical Issues Related to a Combined Probabilistic Numerical Analysis of Contaminant Transport in Porous Media, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with

Cedergren, Harry R.
disc. (of Necessary Redundancy in Geotechnical Engineering, by Jori O. Osterberg, GT Nov. 89, p1511-1531), GT Feb. 92, p328-331

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Cerco, Carl F.

Thirty Year Simulation of Chesapeake Bay Eutrophica-tion, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Thomas M. Cole, p116-126

Cerny, Barbara A.

Information Management for the Department of Energy Office of Civilian Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p.2078-2082

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See Gerstle, Walter H., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2305-2316

Chaallal, O.

Chasallas, U. Glass-Fiber Reinforcing Rod: Characterization and Application to Concrete Structures and Grouted Anchors, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with B. Benmokrane, p606-617

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see Traver, Robert G., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992, p922-930

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see Motz, Louis H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-286

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Water Quantity and Quality for Irrigated Agriculture and Wetlands, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with J. C. Guitjens, p431-436

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Composites Performance in the Infrastructure, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p532-545

Polyolefin Plastic Water Service Line Performance, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p585-597

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Use of Wingz Spreadsheet as an Interface to Total-System Performance Assessment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. H. Treadway, p489-493

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see Muhunthan, B., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), Lutes, ed. p725-728

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Probabilistic Assessment of Composite Structures, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Michael C. -Y. Shiao, p543-547

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Chan, Kadett
Launching Facility Constraints on the Space Exploration
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in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), with Alex J. Montoya,
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see Lee, X., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p445-448

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Micromechanics Modeling for Stress-Strain Behavior of Granular Soils. II: Evaluation, with Mohammed G. Kabir and Yang Chang, GT Dec. 92, p1975-1992

Probabilistic Micromechanics in Constitutive Modeling of Granular Material, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p437-440

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Computer Simulation of River Channel Changes at a Bridge Crossing on a Point Bar, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), with Marshall E. Jennings and Sieve Olona, p76-81

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Realistic Specifications for Steel Bridge Painting, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Machine Trend in Label.

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Hydropower, Water Quality and Waste Discharge,
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Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p1136-1141

an, Neil A.

Natural Analogues: The State of Play in 1992, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992),

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3-D Particle Tracking for the New York Bight, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Mark S. Dortch, p26-35
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Chapra, Steven C.

Chapra, Steven C.

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A Dual Level Methodology for Stormwater Detention Basin Design, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), with Lin-dell E. Ormsbee, p849-854

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Chastanet, Joseph D.

Wanaque Filtration Plant Subgrade Stabilization—A Case History, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Paul M. Blakita, p265-274

Chasten, Cameron P.
Prying and Shear in End-Plate Connection Design, with
Le-Wu Lu and George C. Driscoll, ST May 92, p1295-

Chasten, Monica A.

An Engineering Assessment of Hydrodynamics and Beach Response at Little River Inlet, NC-SC, (Coastal Engi-neering Practice '92, Steven A. Hughes, ed., 1992), with Millard W. Dowd, p520-536

see Rosati, Julie Dean, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p814-829

Chatterjee, Arun see Miller, Terry L., (Transportation Planning and Quality, Roger L. Wayson, ed., 1992), p100-125

Chaturvedi, Lokesh
An Evaluation of the Proposed Tests with Radioactive
Waste at WIPP. (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), with Matthew Silva,
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Chaturvedi, Mahesh C. Irrigation and Drainage—Systems Policy Analysis and India Case Study, WR July/Aug. 92, p445-464

Chaturvedi, Shive K.

Numerical and Experimental Studies of Vibration of Impact Damaged SMC Composite Plates, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Pay-Jye Yang, p1063-

User-Friendly PC-Based Design Package for Gravity-Type Seawalls, WW May/June 92, p267-279

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esolving Construction Disputes by Mediation: Hong Kong Experience, ME Oct. 92, p384-393

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Calculating Flow in Manifold and Orifice System, with Luisa F. R. Reis, EE July/Aug. 92, p585-596

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Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p1240-1241

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Dynamic Effect of Sediment on Dam Hydrodynamics,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), with Kuo-Chyang Chang
and Tin-Kan Hung, p345-348

Chee, C. 42.

Improved Time-History Analysis for Structural Dynamics Calculations, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. R. Robinson, p449-452

Chen, C. N.

see Labuz, J. F., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p523-526

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see Juran, Ilan, GT Apr. 89, p435-456

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Momentum and Energy Coefficients Based on PowerLaw Velocity Profile, HY Nov. 92, p1571-1584

Vedernikov's Number as a Measure of Flow Stability,

(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.

and Nani G. Bhowrnik, ed., 1992), p753

disc. (of Derivation of Infiltration Equation Using Systems Approach, by V. P. Singh and F. X. Yu, IR Nov./Dec. 90, p837-858), IR Nov./Dec. 92, p996-999

see Jan, Chyan-Deng, (Engineering Mechanics, Loren D.

Lutes, ed. and John M. Niedrwecki, ed., 1992),

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see Ling, Chi-Hai, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767

see Ling, Chi-Hai, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852

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Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Chen, D.

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Chen, David C. K.

First-Passage Failure Predictions for Yielding Primary-Secondary Systems, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Loren D. Lutes, p564-567

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George Ghosn, Michel, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p168-171

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Chen, H. L.

Study of Three Dimensional Crack Tip Location of Mor-tar by Acoustic Emission, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with C. T. Cheng, p25-36

Chea, H. S.
Taylor-Galerkin Method for Wind Wave Propagation,
Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), p87-90

Chen, Hong Thin-Walled Space Frames. I: Large-Deformation Analysis Theory, with George E. Blandford, ST Aug. 91, p2499-2520

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Chea, Jerry Modal and Response Analyses of a Paper Machine Foun-dation, (Computing in Civil Engineering and Geograph-ic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with J. A. Bohinsky, p574-581

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A Coastal-Ocean Hindcast/Forecast Model, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), with Yan-H. Zhang. Kwang-W. You and Lie-Yauw Oey, pl75-187.
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Chen, Shiou

see Lin, Jeen-Shang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p425-428

Chen, Stuart S.

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Neural Networks in Dynamic Analysis of Bridges, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Ketan Shah, p1058-1065
see Schwartz, David L., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p277-284

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Chen, Wes Jeng
An Expert System for Impeller Mechanical Design and
Analysis, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), with Hong-Tsung
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Chen, X.-J.
see Sheng, Y. Peter, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p105-115

Chen, Yu Wind Effects on Base-Isolated Structures, with Goodarz Ahmadi, EM Aug. 92, p1708-1727

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Cheng, A. H.-D.
Probabilistic Order of Chaotic Dynamics, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with C. Y. Yang and K. Hackl, p420-423

Cheng, Boyle C.
Metallized Microballoon EMI Shielding Materials, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2351-2359
see Radford, Donald W., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1297-1308

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Cheng, Ke S.
Rainfall Area Identification Using GOES Satellite Data, with Sun F. Shih, IR Jan./Feb. 92, p179-190

see Spaulding, Malcolm L., ed., Estuarine and Coastal Modeling

Cheng, Ralph T.

Cheng, Ralph T.
A Three-Dimensional Tidal Circulation Model Based on Semi-Implicit Finite-Difference Methods, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Vincenzo Casulli, p428-429 see Casulli, Vincenzo, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p620-631

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Cheng, S. L. see Olenik, Thomas J., (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p39-47

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Cheong, Hee Kint

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Chern, S. P. see Shahrooz, B. M., ST Sept. 92, p2475-2494

Cherng, Rwey-Hua

Reliability Analysis of Uncertain Systems Under Ran-dom Loadings, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Y. K. Wen, p49-52

Chesner, Warren H.
Waste Glass and Sewage Studge Frit Use in Asphalt Pavements, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p296-307

Chesnut, Dwayne A.

Characterizing the Altered Zone at Yucca Mountain: The Beginning of a Testing Strategy, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Mar p1026-1039

Demands Placed on Waste Package Performance Testing and Modeling by Some General Results of Reliability Analysis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, p994-1002

see Nitao, John J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p279-296

Cheung, Kwok Fai

see Isaacson, Michael, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p66-80 see Isaacson, Michael, WW Sept./Oct. 92, p496-516

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see Leung, Christopher K. Y., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p744-747

Chia, Chao-Yi

see Ayyub, Bilal M., (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p240-243

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Chieh, Shib-Huang
Development of the San Fernando Basin Groundwater
Flow Model, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Kelli
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Chilcote, Paul
Summary Conclusions & Recommendations of the 1991
Washington State Ports and Transportation Systems,
(Ports '92, David Torseth, ed., 1992), with Paul Sorensen, p1-14

Childs, Stuart W.
Model and Calculations for Net Infiltration, (High Level
Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),
with Austin Long, p1633-1642

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Chilton, David S.
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disc: C. V. Vaidyanathan and S. Arul Jayachandran, ST May 92, p1437-1439
clo: ST May 92, p1439-1440

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Chirlin, Gary R.

Type Curves for a Slug Test in an Infinitely or Seminfinitely Thick Aquifer, (Symposium on Ground Water, Gerard P. Lennon, ed. and Shakrokh Rouhani, ed., 1991), p169-174

err: HY Jan. 92, p119

Chia, Chao-Lin

Entropy-Based Velocity Distribution Model in Study of
Distribution of Suspended-Sediment Concentration,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), with Corey A. Rich, p520-525

Variation of Velocity Distribution along Nonuniform Open-Channel Flow, with David W. Murray, HY July 92, p989-1001

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Slab Behavior in Composite Beams at Openings. I: Analysis, with Richard G. Redwood, ST Sept. 92, p2287-

Slab Behavior in Composite Beams at Openings. II: Tests and Verification, with Richard G. Redwood, ST Sept. 92, p2304-2322

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n467-480

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Diffusion of Radionuclides in Compacted Bentonite,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1922, with Choong-Hwan Jung, Kwan-Sik
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A Comparison of Radionuclide Inventories Between the Direct-Disposal and the Acinide-Burning Cycles, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1381-1386

see Lee, William W.-L., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1387-1396

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see Davis, Mackenzie L., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p49-54

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Reliability Consideration in Shakedown Analysis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with T. V. Galambos, p204-207.

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Probability Model of Load Exceedances under Cyclic Loadings, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p208-

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see Liang, Robert Y., EM Feb. 92, p384-396 see Liang, Robert Y., EM July 92, p1468-1487

Chrestman, A. M.
Rapid Detection of Hydrocarbon Contamination in
Ground Water and Soil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), with G. D. Comes, S. S. Cooper and P. G. Malone, p1165-1170

Christensen, B. A. disc. (of Calculation of Total Conveyance in Natural Channels, by J. Garbrecht and G. O. Brown, HY June 91, p788-798), HY Aug. 92, p1196-1197

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lee Loads on Vertical Bridge Pier at Two Different Model
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Reliability and Probability in Stability Analysis, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1923, with Charles C. Ladd and Gregory B. Baecher, p1071-

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ang, J. B., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p604-607

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Similarity Solutions of Starting Jets and Starting Plumes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p600-603

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Can, ren-na Scour Hole Development and Stabilization at Shinnecock and Moriches Inlets, New York, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Gilbert K. Nersesian, p571-582

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Chua, Kooa Meng
Design of a Support and Foundation for a Large Lunar
Optical Telescope, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), with Stewart W.
Johnson and R. Saliu, p1952-1963
Laboratory Evaluation of Footings for Lunar Telescopes,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Kelly M. Golis and Stewart W.
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Laboratory Testing of Mechanical Rock Bolts, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), with Jerry Lovato and Roy
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Chuang, Laurence Z. H.
Probability of Wave Force on Horizontal Members, (Civil
Engineering in the Oceans V, Robert T. Hudspeth, ed.,
1992), with C. C. Tung, p467-480

Chuang, La-Chia
see Cleveland, Theodore G., (Water Resources Planning
and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p872-877

Chuang, Poon-Hwei
Elastic Analysis of Submarine Pipelines, with David
Lloyd Smith, ST Jan. 92, p90-107
Stability Analysis in Geomechanics by Linear Programming, II: Application, GT Nov. 92, p1716-1726
Stability Analysis in Geomechanics by Linear Programming, I: Formulation, GT Nov. 92, p1696-1715

Chudnovsky, A.

see Issa, M. A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130

Chugh, Ashok K. Stability of Overtopped Embankment Dams, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p414-428

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Chung, Francis I.

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Chung, Hye-Kyo see Choi, Chang-Koon, ST Apr. 92, p944-954

Chung, J. Y.

Quantitative Comparison Between Colloidal and Solute Transport, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), with K. J. Lee, p1966-1971

Chung, Paul Y.

Innovative Intake Design for Raritan River, (Environ-mental Engineering: Saving a Threatened Resource— In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with William S. Howard and Robert Ettema, p220-225

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see Brooks, David A., (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed.,
Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p215-226

Chwang, Allen T.
Wind Effect on Oblique Motion of Two Bodies in a Uniform Flow, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Ching-Jer Huang, p353-356
see Yang, Shih-An, EM Apr. 92, p735-745

Chyu, Jih-Jiang Design Cable-stayed Bridge for Cost Effectiveness and Safety, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p59-62

Clalone, Mary A.
see Burke, Cheryl E., (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), p462-478

see Augusti, Giuliano, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p1-4

Clesielski, Stanley K.
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Civil Engineering Construction, Hilary I. Inyang,
ed. and Kenneth L. Bergeson, ed., 1992), p140-152
see Hoffman, Paul C., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p200-203

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Case Study: Design of Groundwater Quality Monitoring
Systems, (Irrigation and Drainage: Surga a Threatened
Resource—In Search of Solutions, Ted Engman, ed.,
1992), with Richard Bizub, p75-79

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Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Claire, William H.

Housing Chernobyl Relocatees, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p19-28

Clapp, James L.

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See Zaveri, Rohan, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1668-

Clark, Benton C.

see Boyd, Robert, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p25-33

see Adolfson, Molly, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p510-515

Clark, Jocelyn

See Zaghloul, Hany H., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p145-152

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see Galpin, Floyd L., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1047-1054

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see Warnock, J. Gavin, (Ocean Energy Recovery: the State
of the Art, Richard J. Seymour, ed., 1992), p4-33

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Evaluation of BAT for VOCs in Drinking Water, with Jeffrey Q. Adams, EE Mar/Apr. 91, p247-268
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Engineering, Tomasz Arciszewski, ed. and Lewis
A. Rossman, ed., 1992), p105-123

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Clark, T. L.

The Use of Sophisticated Three-Dimensional Numerical Models in Weather Modification Efforts, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with R. T.

Bruintjes and W. D. Hall, p606-611

see Bruintjes, Roelof T., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p612-617

Clarke, Margaret M.
Robotic On-Orbit Fueling of SEI Vehicles, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with David E. Haines and A. J. Mauceri, p1423-1433

Clarke, Robin T.
disc. (of Regional Flow-Duration Curves for Ungauged
Sites in Massachusetts, by Neil Fennessey and Richard
M. Vogel, WR July/Aug. 90, p530-549) with Carlos E.
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Clarke, William J.

Ultrafine Cement Tests and Dam Test Grouting, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Millard D. Boyd and Maan Helal, p626-

Clarkson, William W. see Krishnamachari, Srikanth, (Environmental Engineer-ing Saving a Threatened Resource—in Search of Solutions, F. Pierce Linaweaver, ed., 1992), p370-

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Clemente, J. L. M.
Strength Parameters for Cut Slope Stability in "Marine"
Sediments, (Stability and Performance of Slopes and
Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p865-875

Clemente, José L. M. disc. (of Performance of Axially Loaded Pipe Piles in Sand, by Leland M. Kraft, Jr., GT Feb. 91, p272-296), GT May 92, p832-835

Clemente, Jose L.M.

A Benchmark Slope Stability Study, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1520

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Bayesian Inference for Feedback Control. I: Theory, with J. B. Keats, IR May/June 92, p397-415
Bayesian Inference for Feedback Control. II: Surface Irrigation Example, with J. B. Keats, IR May/June 92, p416-432

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see Dedrick, A. R., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600

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Irrigation Uniformity Relationships for Irrigation System
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clo: IR Nov/Dec. 92, p1008
disc. (of Rational Approach for Modifying Rotational Water Delivery Schedule, by Sanjay Bhirud, N. K. Tyagi and C. S. Jaiswal, IR Sept/Oct. 90, p632-644), IR May/June 92, p507-508

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See Morau, A. A., F. Apr. 22, p114-129
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Optimal Aquifer Management for Controlling Land Subsidence, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Lu-Chia Chuang, p872-877

Clifft, R. C.

Gas Phase Control for Oxygen-Activated Sludge, EE May/June 92, p390-401

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Cline, K. Michael
See Fenster, David F., (High Level Radioactive Waste
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see Fenster, David F., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p751-754

ss, K. D.

See Einfeld, K., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1860-1866

Clough, G. Wayne
Construction Induced Movements of Insitu Walls, (Design and Performance of Earth Retaining Structures, Philip Lambe, ed. and Lawrence A. Hansen, ed., 1990), with Thomas D. O'Rourke, p439–470
disc: Alan Macnab, GT Apr. 92, p662-664
clo: GT Apr. 92, p665-666
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see Sherard, J. L., (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p204-266

Ctyde, Eric S.
Dry Creek Watershed Flood Control Plan: A Case Study,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with M. N. Saquib and
Dennis J. Huff, p287-292

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Management, High Level Radioactive Waste Management Program Committee, 1992), p1991-1996

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Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p1349-1364

Coburn, N.

see Branch, K anch, K., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p156-160

Cochrase, Hal

Loss Accounting Principles With Emphasis on Bridge
Failure, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), p1076-1081

Cochrane, Patrick C.

see Carter, Trevor G., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-422

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disc: Amy C. Fowler, IR Mar/Apr. 92, p334-336
clo: IR Mar/Apr. 92, p336-337

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see Russell, Thomas S., Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941

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see Ott, Chun-Hou, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p340-345

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Analysis of Welded Tubular Connections Using Continuum Damage Mechanics, with Jihad S. Jubran, ST Mar. 92, p828-845

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Responding to Disasters, CE Jan. 92, p6

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disc. (of Delta Method for Estimating Primary Production, Respiration, and Reaeration in Streams, Steven C. Chapra and Dominic M. Di Toro, EE Sept./Oct. 91, p640-655), EE Nov./Dec. 92, p1001-1003

Cohen, Wendy L

Conen, Wessay 2.

Degradation of Ground Water by Tetrachloroethylene, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), with Victor J. Izzo, p63-68

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Yield Safety, Cracking Control, and Moment Redistribu-tion, with Paolo Riva, ST Feb. 92, p447-468

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see Jennings, R. Brad, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p36-61

Colbert, Raiph G.

Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p862-872

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see Johnson, Charles L., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-

Cole, Robert E.

Cote, Robert E.

Telerobotic Field Geologist: Preliminary Results of a Feasibility Study, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Charlotte Albert-Thenet, G. Jeffrey Taylor, Paul Johnson, Forrest Buzan, Joy Ishigo and Curtis Ikehara, p1434-1442

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see Chapman, Raymond S., (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p158-163

Coleman, C. J.

Colorimetric Determination of Fe<sup>2+</sup>/Fe<sup>3+</sup> Ratio in Radioactive Glasses, (*High Level Radioactive Waste Management*, High Level Radioactive Waste Management Program Committee, 1992), with E. W. Baumann and N. E. Bibler, p557-561

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see Frei, Mark W., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p409-415

Coleman, Wesley E., Jr.

Chesapeake Bay Field Modeling and Monitoring Projects, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p221-233

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see Wang, O. S., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p416-420

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see Ballivy, G., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p588-600

Coller, Philip J.

disc. (of Motown Tunneling, by Paul Tarricone, CE Apr. 92, p60-61), CE Aug. 92, p24

Collin, James G.

Timber Crib-Faced Soil-Nailed Retaining Wall, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Mohammed A. Gabr and Alan G. MacKinnon, p1457-1463

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Collins, Michael P.

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Collins, Robert J.

Highway Construction Use of Wastes and By-Products, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Stanley K. Ciesielski, p140-152

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Application of SMA Technology in Georgia, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Steve Fer-nando Valdez, p160-171

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Colman, Steven B.

Using Traffic Network Models to Assess Site Impact Traffic, Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Michael N. Aronson, p118-122.

Colin, Raul
see Morris, Gregory L., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p837-842

Colonell, J. M.
Environmental Effects of Beaufort Sea Causeways,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1932), with B. J. Gallaway and A. W. Niedoroda, p958-974

Colony, David C.

disc. (of Existentialism, Engineering, and Liberal Arts, by
David A. Bella, El July 90, p309-321), El July 92,
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disc. (of Plain Engineering: Philosophical and Ethical
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Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
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Visualization of Groundwater Contaminant Parameters, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with James Warner and S. Paul Miller, p1177

Comi, C. Dynamic Analysis of Elastoplastic Softening Discretized Structures, with A. Corigliano and G. Maier, EM Dec. 92, p2352-2375

Committee on Construction Equipment and Techniques, (Lloyd S. Jones, chmn.) Trenchless Excavation Construction Methods: Classifica-tion and Evaluation, CO Sept. 91, p521-536 disc: Lynn E. Osborn, CO Dec. 92, p825 clo: CO Dec. 92, p825

Committee on Design of Steel Building Structures of the Committee on Metals, Structural Division Compendium of Design Office Problems, ST Dec. 92,

Committee on Employment Conditions and Professional Activities Staff ASCE 1991 Salary Survey: Summary of Findings, El Apr.

92, p167-189

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The Challenge of Constraining Mass for Planetary Construction, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p350-356

A Vision for Planetary Exploration, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1932, with Robert K. Callaway, Mark K. Diogu, Gene R. Grush, E. Mason Lancaster, William C. Morgan, David A. Petri, Barney B. Roberts, Lester A. Pieniazek, Thomas M. Polette and Larry D. Toups, p2188-2195

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Problems and Solutions, Robert E. Paaswell, ed.,
Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992),
p32-36

Conradt, Hans see liteda, Jon, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p250-257

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Status of Infrastructure Studies and Results, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p183-189

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The Construction Management Committee of the ASCE Construction Division
Constructability and Constructability Programs: White Paper, CO Mar. 91, p67-89
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Conte, Enrico

Conte, Earko disc. (of Earthquake-Induced Permanent Deformations: Probabilistic Approach, by M. K. Yegian, E. A. Marciano and V. G. Ghahraman, GT Jan. 91, p35-50) with Giovanni Dente, GT June 92, p971-973

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Ductile Multiple-Anchor Steel-to-Concrete Connections, with Richard E. Klingner, ST June 92, p1645-1665

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Cooke, J. Barry
Concrete-Face Rockfill Dam: II. Design (Paper introduced by J. Barry Cooke), (Embankmeni Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with James L. Sherard, p512-532
see Sherard, James L., (Embankmeni Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p494-511

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see Morgenthaler, George W., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1720-1727

Cooper, J. R.
Radiological Protection Criteria for Solid Radioactive
Waste Disposal, (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), with I. M. Barraclough
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see Thompson, Ken. (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p133-138

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Cooper, Steven E.
Water Main Rehabilitation Using Silicote Lining, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Gregory C. Heitzman, p

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Using a Numerical Model to Evaluate Dredging Options, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1024-1029 see Gist, Wendy S., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1000-1005

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Current Perspectives on Performance Assessment at the NRC, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with N. A. Eisenberg, M. V. Federline and John D. Randall, p2145-2150

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Modeling Fault Rupture Hazard for the Proposed Repository at Yucca Mountain, Nevada, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. R. Youngs, p1142-1150

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The Thermal Analysis of BR-100: A Barge/Rail Nuclear
Spent Fuel Transportation Container, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),

Corapciogla, M. Yavuz

Analytical Prediction of Gasoline Thickness on the Water
Table, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), with Rajasekhar
Lingam and Vern K. Haisler, p254-259

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Corliss, John see Kirshen, Paul, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p208-212

Corneille, Richard

Implementing a Wellhead TCE Removal Project in Red-lands, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Michael Huffstutler, p315-320

see Karamchandani, A., ST Apr. 92, p895-909

see Karamchandani, A., ST Apr. 92, p910-925

Cornforth, Derek H.

Pelton Landslide: An Unusual Double-Wedge Failure, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with D. Andrew Vessely, p310-324

Cornwell, D. A. see Wang, M. C., EE Nov./Dec. 92, p848-864

Corotis, Ross see Srinivasan, Mukund, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p388-391

Corotis, Ross B. disc. (of Ph.D. Roadblocks for Experienced Engineers, by Bruce E. Marsh, El Jan. 90, p56-60), El Apr. 92, p196-

see Islam, M. Saiful, ST Jan. 92, p207-222 see Tao, Zongwei, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),

see Zimmerman, James J., (disc), ST Dec. 90, p3475-3496

Correia, Luís R.P.

Fully Coupled Unsteady Mobile Boundary Flow Model (FCM), with Bommanna G. Krishnappan and Walter H. Graf, HY Mar. 92, p476-494

Corsi, Richard L.

Cors, Richard L.
Oxygen Transfer and VOC Emissions from Sewer Drop
Structures, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Jennifer Shepherd, Lori Kalich, Hugh Monteith and Henryk Melcer, p305-310

Cortez, Edel R.

see Korhonen, Charles J., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p382-397

Corwin, Dennis L.

Use of the TETrans Model in Predicting ET Effects on Groundwater Quality, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p152-157

Using GIS To Locate Salinity on Irrigated Soils, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Mark Sorensen and James D. Rhoades, p468-475

Cory, John M., Jr.
see Jensen, David W., (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p12731285

Costa, Joseph see Monahan, Rosemary, CE Mar. 92, p56-59

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Costes, Nicholas C.
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Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p2082-

see Sture, Stein, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1035-1038

Costin, L. S.

Costin, L. S.
Summary of the Exploratory Studies Facility Alternatives
Study, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with A. W. Dennis and A. L.
Stevens, p643-649
see Fewell, M. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670

Case Study: Design of a Traditional Village Master Plan, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p111-120

Cotton, George K.
disc. (of Scour Downstream of Grade-Control Structures,
by Noel E. Bormann and Pierre Y. Julien, HY May 91,
p579-594), HY July 92, p1068-1070

Metallurgical Residue for Solubilization of Metals from Sewage Sludge, with G. Mercier, EE Sept./Oct. 92, p808-813

Coulbeck, Brys

ee Orr, Chun-Hou, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p340-345

Coulet, C.
see El Ghoche, H., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p1368-1379
see Soubra, M., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed.
and Ilan Juran, ed., 1992), p1163-1174

Coulthard, Michael A.

see Tang, Siong K., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p770-777

e, Joel R.

Diesel as Case of Consumer Choice in Alternative Trans-port Fuels, EY Aug. 92, p95-108

Covey, D. L.

covey, D. L. See Pitt, J. M., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p462-475

Cox, Anthony L., Jr.
Dealing with Uncertainty: From Health-Risk Assessment
to Environmental Decision Making, with Paolo F. Ricci, EY Aug. 92, p77-94

Cox, Jack C.

Value Engineering in Coastal Design, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p935-951

see Raichlen, Fredric, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p425-446

Coyle, Harry M. Improved Design Procedures for Vertically Loaded H-Piles in Sand, with Ronald Ungaro, GT Mar. 91, p507-

disc: Thomas F. Wolff and Patrick J. Conroy, GT July 92, p1133-1136 clo: GT July 92, p1136-1137

Coyle, Judith A. see Males, Richard M., (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p105-123

Coyle, Michael see Sanvido, Victor, CO Mar. 92, p94-111

Craddock, Patti P.

see Loong, Linda Rae, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509

Craddock, Robert A.

The Initial Exploration of Mars: Rationale for a Return Mission to Chryse Planitia and the Viking I Lander, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 488-1499

Craig, James
see El-Gazairty, Loai, (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p896-904

Craig, Paul M.
A Graphical Post-Processor for CE-QUAL-W2, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Kenneth C. Black and Robert E. Yager, p61-71

Cramer, Steven M.
Method for Simulating Tension Performance of Lumber
Members, with William B. Fohrell, ST Oct. 90, p27292746

disc: Ivan Orosz, ST May 92, p1433-1435 clo: ST May 92, p1435-1436

Crandall, Keith C.

see Al-Bahar, Jamal F., CO Sept. 90, p533-546 see Oloufa, Amr A., CP Apr. 92, p161-177

Crawford, Carl B. disc. (of The Mechanical Aging of Soils, by John H. Schmertmann, GT Sept. 91, p1288-1330), GT Dec. 92, p2009-2012

Crawford, John E.

A Novel Aerobrake Design for a Mars Lander, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Ralph G. Colbert and Manual I. Cruz, p862-872

Creer, J. M.
see McConnell, P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180

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Creighton, David E., Jr. disc. (of Effect of Drought on Urban Water Supplies. I: Drought Analysis, by David M. Frick, Dennis Bode and Jose D. Salas, HY June 90, p733-753), HY Apr. 92, p643-644

Cremona, C. F.

Modal Identification Algorithm with Unmeasured Input, with J. A. Brandon, AS Oct. 92, p442-449

see Bjorhovde, Reidar, (disc), ST May 90, p1230-1246

Crider, Steven S.

Cruser, Steven S.

Plain Engineering: Philosophical and Ethical View, El Apr. 90, p148-155
disc: David C. Colony, El Jan. 92, p96-97
disc: Eugene H. Harlow, El Jan. 92, p97-98
disc: Lewis A. Tambs, El Jan. 92, p98
clo: El Jan. 92, p98-99

Criswell, David R.

Lunar-Based System to Supply Power to Earth: Summary of Concept, Benefits, and Development, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2392-2399

Criswell, Marvin E.

Criswell, Marvis E.
Space Civil Engineering Option—A Progress Report, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Willy Z. Sadeh, p2136-2146
see Nowak, Paul S., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p78-88

Croad, R. N. disc. (of Modeling Channel Bed Transients Using Explicit F-D Schemes, by B. Morse and R. D. Townsend, HY Nov. 90, p1345-1356), HY Apr. 92, p656-659

Croff, Allen G.

An Overview of Partitioning-Transmutation, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), with Gordon E. Michaels, p1359-1367

Croil, James G. A. see Gonçalves, Paulo B., ST Apr. 92, p970-985

Cromer, M. V.

Indicator Variography for Spatial Characterization of Aq-uifer Heterogeneities, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with R. M. Srivastava, p420-425

Crommelia, Robert W.
see Pringle, Weston S., (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Paaswell, ed.,
Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992),
p26-31

Cronhjort, Bjorn T.
Validation of System Models of Deep Geological Disposal of High-Level Nuclear Waste, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Grant Sheng, p2122-2125

Cronshey, Roger see Woodward, Donald E., (disc), HY June 91, p725-737

Croquevielle B., Dario see Forbes, Brian A., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p47-62

Croswell, Richard M.

Mining for Building Expansion, with Robin B. Dill and John Booth, CE Dec. 92, p48-51

Crouse, John M.
see Preusch, David P., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p810-816

Crowe, B.

Crowe, B.
The Lathrop Wells Volcanic Center: Status of Field and
Geochronology Studies, [High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), with R. Morley, S.
Wells, J. Geissman, E. McDonald, L. McFadden, F.
Perry, M. Murrell, J. Poths and S. Forman, pl 997-2013

Crowe, Bruce M.

Crowe, Bruce M.
Recurrence Models of Volcanic Events: Applications to Volcanic Risk Assessment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. Picard, G. Valentine and F. V. Perry, p.234-2355 see Perry, Frank V., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2014-2024

Crowley, Christopher see Ralston, Michael, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-

Crowther, G. Scott

Estimating Thaw-Strain Settlement of Frozen Fill, CR Dec. 92, p152-159

Craise, J. F.
see Barbé, D. E., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p791-796

see Sassenfeld, Nora C., (Nondestructive Testing of Con-crete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p206-214

Crull, W. W.

see Williams, A. N., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p332-335

Cruse, Thomas A.
see Mahadevan, Sankaran, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p487-490

see Zvarick, Albert G., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1067-1070

Cruz, Evarett, Jr. Manholes and Microtunneling, CE Dec. 92, p52-55

Cruz, Manual I.

see Crawford, John E., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p862-

Cuenca, Richard H.

Cuenca, Richard H.

See Carrijo, Osmar A., IR Nov./Dec. 92, p943-953

see Engman, Edwin T., (Irrigation and Drainage: Saving a

Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p529-534

see Katul, Gabriel G., IR July/Aug. 92, p601-618

see Neale, Christopher M. U., (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p541-546

Culbreth, W. G.

Labeling of the Spent Fuel Waste Package, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. K. Chagari, p395-400

Cullinane, M. John
Optimization-Availability-Based Design of Water-Distribution Networks, with Kevin E. Lansey and Larry W. Mays, HY Mar. 92, p420-441
see Zappi, Mark E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhowmik, ed., 1992), p1184-1189

Cullinane, M. John, Jr. see Fleming, Beth C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1204-1209

Cullison, Ralph O., III.
see Balog, George G., (Environmental Engineering: Saving A Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p145-150

Culver, Charles G.

disc. (of Public-Safety Issues in Collapse of L'Ambiance Plaza, by Frank J. Heger, CF May 91, p92-112) with R. D. Marshall, CF May 92, p126-128

Culver, Theresa B.

see Ong, Say Kee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179

an, Steven L.

Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p353-362

Cundy, E. J. see Behr, R. A., ST Dec. 90, p3448-3457

Cunnane, Mark
see Kossik, Richard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.186-1793

see Miller, Ian, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p494-501

Cuoco, Daniel A.

Investigation of L'Ambiance Plaza Building Collapse, with David B. Peraza and Thomas Z. Scarangello, CF Nov. 92, p211-231

Curran, Donald R.

Curran, Donass R.
Softening Models for Concrete: Stability and Uniqueness,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), with James K. Gran, Lynn
Seaman and Tarabay H. Antoun, p369-372

see Swint, D. O., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160

see McKinley, I. G., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1770-1776

Curtis, David

Curus, Davia

Plutonium in Uranium Deposits: Natural Analogues of Geologic Repositories for Plutonium-Bearing Nuclear Wastes, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with June Fabryka-Martin, Ruben Aguilar, Moses Attrep, Jr. and Fred Roensch, p338-344

Curtis, G.

see Branch, K., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p156-160

Curtis, Lamont W. see Mann, Douglas W., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119

Cushman, Nancy S.
Technology Transfer in Building Construction—Case of Seismic Design, with C. H. Nam and C. B. Tatum, CO Mar. 92, p129-141

Cutler, A. H.

See Waldron, R. D., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p690-

Cutler, Andrew Hall
Evaluation of Processing Options for Lunar Oxygen Production, Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), with Robert D. Waldron,
p704-713.

**Cutting**, Fred

see Grant, Lavonia, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p839-

Cywiński, Zbigniew Howe Truss Behavior Interpreted by Deflections, with Marek Jasina and Stefan Niewitecki, CF Aug. 92,

Czompo, J. see Gao, Y., SU Feb. 92, p11-23

Da Costa, Steven L.

Gravel Equilibrium Beach Design for Arresting Shore Erosion at Flathead Lake, Montana, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Joseph L. Scott and David P. Simpson, p154-169

seph L. Scott and Salvanda Advances and Salvanda Reliability of Portal Frames With Interacting Stress Resultants, ST Dec. 90, p3475-3496 disc: James J. Zimmerman, J. Hugh Ellis and Ross B. Corotis, ST July 92, p1976-1977 clo: ST July 92, p1977-1978

Dabareiner, Thomas J.
Traffic Impact Fees in Schaumburg, Illinois, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p170-174

Daemen, J. J. K. see Ran, C., (Grouting, Soil Improvement and Geosynthet-ics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), p360-371

Daggett, Larry Leon see Webb, Dennis Wayne, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p598-614

see Roth, M. J. S., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p160-163

ab, M.

see Woldt, W., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416

Dahab, M. F.
Solid Waste Management: The Extension Service Initia-tive, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with W. E. Woldt, p543-548

see Adelman, D., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p611-616

Dahab, Mohamed F. see Lee, Yong W., WR Mar./Apr. 92, p151-165

Dahmen, Neil J.

Mechanical Excavation of Roadways and Chambers in Hard Rock, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), with John Turner, p1507-1515

Dai, Dingrhong Research/Application of System Engineering to Water Resources Systems, with Xueren Lu, Yuanyu Guo and Xinyi Xu, WR May/June 92, p337-349

Dakoulas, Panos Fine Ottawa Sand: Experimental Behavior and Theoreti-cal Predictions, with Yuanhui Sun, GT Dec. 92, p1906-1923

Dal Pino, John A.

see Wyllie, Loring A., Jr., (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p107-118

Dalane, J. I.

see Karamchandani, A., ST Mar. 92, p684-700

Daier, David J.
The Total System Solution, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with James B. Hinte, p642-647

Design of RC Sections with Generic Shape under Biaxial Bending, with Luigino Dezi, ST Apr. 92, pt 138-1143 disc. (of Concrete Box Sections Under Biaxial Bending and Axial Load, by Cengiz Dundar, ST Mar. 90, p860-865) with Luigino Dezi, ST Feb. 92, p621-623

Bodisseys, Kenneth E. Shouldn't it be Transportation Impact Assessment?, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p133-137

Dairympie, Robert A. Prediction of Storm/Normal Beach Profiles, WW Mar./ Apr. 92, p193-200

see Hancu, Simion, HY Dec. 92, p1621-1638

See Francia, Simboth K. R.
Prediction and Sensitivity of Recharges Due to Rainfall, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Lakshmi N. Reddi, p397-402

p391-402.

Danese, F. L.
see Johnson, P. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p310-1316

see Shappert, L. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p190-195

Investigation of the Behavior of Reinforced Plastic Col-umns with Concrete Core, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p666-676

Daniel, Brace B.
see Wessels, William R., (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p815-

826

Daniel, David E.

Water Content-Density Criteria for Compacted Soil Liners, with Craig H. Benson, GT Dec. 90, p1811-1830 disc: S. Leroueii, R. Bouchard and J. P. Bihan, GT June 92, p963-965 disc: Donald R. McMahon and Michael J. Mann, GT June 92, p965-967 clo: GT June 92, p965-968 see Broderick, Gregory P., GT Oct. 90, p1549-1567 see Elsbury, Bill R., GT Nov. 90, p1641-1660 see Estornell, Paula, GT Oct. 92, p1922-1606 see Kim, Woon-Hyung, GT July 92, p1083-1097 see Koerner, Robert M., CE May 92, p55-57 Davilel. Thomas H.

Daniel, Thomas H. see Mann, Douglas W., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p104-119

Danielians, A. see Yang, J. N., EM July 92, p1423-1440 see Yang, J. N., EM July 92, p1441-1456

Danielson, Richard E.
see Thompson, Ken, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p133-138

Danko, G.
Coupled Heat and Moisture Transport Model for Underground Climate Prediction, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. Mousset-Jones, p790-798

Dannemann, Robert W. disc. (of Uplift Capacity of Z-Purlins, by Roger A. La-Boube, ST Apr. 91, p1159-1166), ST July 92, p1978-1980

Daord, Osama E. K.
Defects in Aluminum Windows and Impact on Dust and
Air Infiltration, CF Feb. 92, p12-33

Darby, Jeannie L. see Williams, Mary E., EE Nov./Dec. 92, p988-993

Dardeau, E. A., Jr. see Landin, Mary C., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p439-444

Dargahi, Bijan Controlling Mechanism of Local Scouring, HY Oct. 90, p1197-1214 disc: Charles R. Neill, HY Mar. 92, p504 clo: HY Mar. 92, p504-505

Darkooy, 10m. New Hong Kong International Airport, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), with Peter Wright, p272-280

Darnell, Kenneth E. see Brill, Gary T., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p791-802

Darragh, Robert D. see Singh, Sukhmander, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1033-1049

Dart, Warwick T.

see Wark, Robert J., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p63-82

Darwin, David

Automated Identification of Compression-Induced Cracking in Cement Paste, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Kirk W. Ketcham, Francisco A. Romero and Jeffrey L. Martin, p494-497

Darzi, Kent

see Schonberg, William P., AS Oct. 92, p405-424

Das, Braja M.

see Shin, Eun C., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p816-828

las Neves, E. Maranha

disc. (of Construction and Performance of Two Large Rockfill Embankments, by Gordon M. Matheson and William F. Parent, GT Dec. 89, p1699-1716) with A. Veiga Pinto, GT Jan. 92, p159-160

Das, P. C.

see Rao, M. Gopala, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1587-1592

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Form Comparison Without Anatomical Landmarks, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Mona E. McAlarney, Colin Goodall, Letty Moss-Salentijn and Melvin L. Moss, 2023 0:32

ps/12-9/5 Stochastic Finite & Boundary Element Simulations, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), p120-123 Stochastic Finite and Boundary Elements, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p932-935

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Application for a Mixing Zone Authorization for the Ocean Discharge of Once-Through Cooling Water in Puerto Rico, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Donald Galya, p605-610

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Load and Temperature Measurements for a Study of Rutting Under High-Pressure Tires, (Road and Airport
Pavement Response Monitoring Systems, Vincent C.
Janoo, ed. and Robert A. Eaton, ed., 1992), with Susan
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Daudt, Carl R.

Yucca Mountain Digital Database, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Charlotte Abrams and William J. Hinze, p442-449

Davalos-Sotelo, R.
Bolted Connections in Wood under Bending/Tension
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Davidson, Roger A.
Architectures for Mission Control at the Jet Propulsion Laboratory, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Susan C. Murphy, p1567-1578

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see Nein, Max E., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1809-1831

Bodkin Island Wetland Restoration Project Design, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), with S. T. Maynord, J. W. McCormick, Mary C. Landin, Robert A. Evans and Robert Blama, p350-355

Davis, James E.
Container Terminal Planning: 2001, (Ports '92, David Torseth, ed., 1992), p15-28

Davis, Mackearie L.
Guidance for Decontamination of Debris, (Environmental Engineering: Saving a Threatened Resource—In
Search of Solutions, F. Pierce Linaweaver, ed., 1992),
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Lunacy, Legerdemain or Levitation: Legal Assessment of the ASCE Model Water Code, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p225-230

Seven Legal Strategies to Cool Global Warming, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p511-516

Davis, Raymond E. Discussion of: The Optimum Gravity Dam by J. M. Raphael, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p20-21

Application of Extremely Low Altitude Photogrammetry for Monitoring Coastal Structures, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Thomas R. Kendall, p892-897

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ea Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p305-310

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Pavement Response Measuring System, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p78-95

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Risk Consistent Estimate of Heat-Straightening Applica-tions. I: Plates, with Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3394-3409

Risk Consistent Estimate of Heat-Straightening Applica-tions. II: Beams, with Paul F. Robinson and R. Richard Avent, ST Dec. 92, p3410-3426

Computational Gradient Plasticity, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed. 1992), with H.-B. Mühlhaus and J. Pamin, p776-779

see Sluys, L. J., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p624-627

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Flavors and Mixins of Expert Systems Technology Trans-fer Model for AEC Industry, with Panagiotis Mitro-poulos, CO Sept. 92, p435-453

knowledge Elicitation Strategies and Experiments Applied to Construction, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), with C. William Ibbs, p69-85

ROSSIMAN, CU., 1972), WILD C. WILLIAM 10018, P078-85. Skull Object Space: Essential Knowledge Typologies for Proprietary Brand Name or Equal Specifications Interpretation. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Gaye A. Oralkay p614639. A. Oralkan, p614-622

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Fundamental Observations on Cement Based Grouts (1):
Traditional Materials, (Grouting, Soil Improvement
and Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), with B. Bosco, R.
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Fundamental Observations on Cement Based Grouts (2):
Microfine Cements and The Cemill® Process, (Grouting, Soil Improvement and Geosynthetics, Roy H. Boden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with B. Bosco, R. Granata and D. A. Bruce, p486-499

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see Roth, W. H., (Ports '92, David Torseth, ed., 1992), p336-349

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disc. (of Air Entrainment by Spillway Aerators, by Peter Rutschmann and Willi H. Hager, HY June 90, p765-782) with S. H. Neidert and J. J. Ota, HY Jan. 92, p114-116

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see Loganathan, N., GT Apr. 92, p593-610

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Sea Defence System at Herne Bay, England, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with J. van Overeem, A. G. Roberts and M. R. Beck, p90-103

De Wolfe, James R.

The Effects of Land Applied Water Treatment Residuals on Soil Phosphorus, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Brian A. Dempsey, p297-302

Dean, M. H.

Intermediate Level Waste Transport Shielding Study, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with L. S. Grindrod, S. M. Jones and R. W. T. Sievewright, p.2062-2068

Beach-Nourishment Performance Predictions, Chul-Hee Yoo, WW Nov./Dec. 92, p567-586

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Computer Modeling Responsibilities for Municipalities,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p338-343

asy, Mackey W

Signing Systems: Directional, Identity, and Graphic Systems for the Port of Long Beach, (Ports '92, David Torseth, ed., 1992), with Wayne Hunt and Louis Rubenstein, p85-93

emand Management Strategies for Providence Water poly Board, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Frank M. Grablutz and Paul Gadoury, p169-175

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Sherard Contributions, Sukhanander Singh, ed.,

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see Sherard, James L., (Embankment Dams—James L.
Sherard Contributions, Sukhanander Singh, ed.,

Sherara Contributions, Surnanander Singn, ed., 1992), p94-119

see Sherard, James L., (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284

see Sherard, James L., (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed.,

1992), p285-300

DeCorla-Souza, Patrick see Fleet, Christopher R., (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p126-141

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Dedrick, A. R.

Learner, A. R.
An Interagency Program to Improve Irrigated Agriculture, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with W. Clyma, A. J. Clemmens, R. D. Gibson, J. A. Replogle, R. E. Ware, P. N. Wilson and D. B. Levine, p595-600

Dee, Dick P.

Dee, Dick P.

Numerical Model Verification by Prescribed Solution
Forcing—A Test Case, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
with F. Mauricio Toro and Sam S-Y. Wang, p416-421

DeFranco, Samuel J. Size, Temperature and Rate Effects on the Fracture Toughness of Saline Ice, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with John P. Dempsey, p264-267

Degaraff, George see Rudolf, C. Davis, III., (Ports '92, David Torseth, ed., 1992), p836-848

DeGeorge, John F.
Computer-Aided Support for Water Quality Modeling of the Russian River, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Gerald T. Orlob, p182-187

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Deierlein, Gregory G.
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Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p229-236
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Delmas, Ph.
Two Full Size Structures Reinforced by Geotextiles, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Ph. Gotteland, J. P. Gourc and S. Haidar, p1201-1212

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see Everts, Craig H., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p779-793

see Walker, James R., (Ports '92, David Torseth, ed., 1992), p868-883

1992), p868-883
Demissie, Misganaw
Distribution of Wetland Hydrologic Parameters, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with abdul Khan, p470-473 see Akanbi, Abiola A., (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p482-487
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see Wang, M. C., EE Nov/Dec. 92, p848-864
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Mobilization and Removal of Contaminants Associated
with Urban Dust and Dirt, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with YuanLiang Tai and Stuart Harrison, p486-491
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disc. (of Chemical Dosing of Small Water Utilities Using
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Deodatis, George

Deodatis, George
F.K Spectra From a Haskell-Type Source in a Multiple-Layered Half-Space, (Probabilistic Mechanics and Structural and ceotechnical Reliability, Y. K. Lin, ed., 1992), with Andronikos Theobanis and Masanobu Shi-nozuka, p272-275
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1992), p41-44

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Derrickson, William B.

Managing Large Complex Projects, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1751-1757

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Mechanical Properties of Compacted Lunar Simulant
Using New Vacuum Triaxial Equipment, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), with Hamid Saadatmanesh and Tom Allen,
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Structural Materials from Lunar Simulants Through Thermal Liquefaction, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Kirsten Girdner, p528-536

Deschamps, R. J.

A Study of Slope Stability Analysis, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with G. A. Leonards, p267-291

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see Roberts, John P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p233-236

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Design of Floating Stone Columns in Hydraulic Fill,
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Borden, ed., Robert O. Holtz, ed. and llan Juran, ed.,
1992), with David W. Kozera and Frank J. Swekosky,
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see Tripp, Sandra L., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p12-17

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Di Paola, M.

Vibration of a Bridge Under a Random Train of Moving Loads, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), with G. Ricciardi, p136-139

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Dias, William C.

Directions for Lunar Construction: A Derivation of Rerections for Lunar Construction: A Derivation of Re-quirements from a Construction Scenario Analysis, [Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Subramani T. Venkataraman, Randel A. Lindemann, Jacob R. Matijevic, Jeffrey H. Smith and Richard R. Levin, p357-367

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see Yourman, Allen M., Jr., (Ports '92, David Torseth, ed., 1992), p376-389

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Planning and Operation of a Multi-Reservoir Water Dis-tribution System, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Peter W. F. Louie, Manouchehr Mahjoub and William W-G. Yeh, p316-321

see Weghorst, Paul A., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed.,

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ee Johnson, Charles L., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1832-1841

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Developments of Modelling Software for Civil Engineers,
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Engman, ed., 1992), p372-377

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1992), p108-113

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Pullout Testing of High-Strength Concrete Members, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with Michael Abshire, p194-205

Dilorenzo, Joseph L.
Hydraulic Controls on Delaware Estuary Water Quality,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), with Georgia R.
Marino, Poshu Huang, Tavit O. Najarian and M.
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Planning for Water Conservation Through Irrigation System Modernization and Rehabilitation, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with K. I.
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see Connolly, John F., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-2195

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Hydraulic Geometry of Threshold Channels, with Gregorio Vigilar, HY Apr. 92, p597-614
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see Papanicolaou, Athanasios, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p735-740

see Vigilat, Gregorio, Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p729-734

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Rehabilitating Small Earth Embankments with RCC, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p491-505

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Non-Gaussian Vortex Induced Aeroelastic Vibrations under Gaussian Wind, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p292-295 diac. (of Simulation of Improved Gaussian Time History, by Loren D. Lutes and Jin Wang, EM Jan. 91, p218-224), EM June 92, p1276

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Djevid, Mohammad
Probabilistic Particle-Related Constitutive Model for
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see Will, Kenneth M., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1195-1203

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Scott Sternberger, CE June 92, p56-58

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Civil Engineering Construction, Hilary I. Inyang,
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Explosive Forming of Aluminum-Lithium Alloys, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Bao Nguyen, p1250-1261

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Interfacing the Existing Cask Fleet with the MRS or Fit-ting Round Pegs Into Square Holes, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. E. Hahn, p1889-1895

MRS Project Management, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. Vlahakis, pl 896-1902

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Evaluation of Nitrogen Removal Utilizing RBC's Anoxic Reactors, and Recycle, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with James C. O'Shaughnessy, p36-41

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Conservative Tracers for the C-Well Hydraulic Testing, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Gary Coates and Klaus J. Stetzenbach, p1991-1996

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see Zwerneman, Farrel J., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p339-352

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Water Quality Effects on Eucalyptus ET, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Kenneth Tanji, Steve Grattan, Fawzi Karajeh and Marc Parlange, p164-170

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Modeling Nutrient Loadings from Croplands in the Chesapeake Bay Watershed, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Avinash S. Patwardhan, p817-822

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Dormsth, K. W.

Considerations in Managing the Assessment of the Canadian Nuclear Fuel Waste Disposal Concept, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. A. Gillespie and S. H. Whitaker, p1737-1742

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Structural Design Methodology of Large Space Structures, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1022-1034

Dorrity, J. Lewis

Constructing Radiation Shields with Textiles for Lunar Applications, Engineering Construction, and Operations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with James W. Brazell, p368-377

Dorsey, John T.
Structural Studies of Two Aerobrake Heatshield Panel
Concepts, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), with James W. Dyess,
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Hydrodynamics for Water Quality Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Billy Johnson, p145-150

Bhowmik, ed., 1992), with Bally Johnson, p145-130
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ee Chapman, Raymond S., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford,
ed., Alan Blumberg, ed., Ralph Cheng, ed. and
Craig Swanson, ed., 1992), p26-35

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Using Computer Models in Site Impact Assessment, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p123-127

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stimating Extreme Values of Run-Up on Beaches, WW Mar./Apr. 92, p220-224

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Wave Forecasting for Construction in Mobile Bay, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with William W. Schroeder and John T. Robinson, p713-727

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Dowding, Charles H.
Frequency Based Control of Urban Blasting, (Excavation and Support for the Urban Infrastructure, T. D.
O'Rourke, ed. and A. G. Hobelman, ed., 1952), p181-

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Use of Manned Submersibles to Investigate Slumps in Deep Water Gulf of Mexico, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Michael J. Kaluza and Harry H. Roberts, p770-782 see Dutt, Rathindra N., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p546-559

P., RODER 1. DANSPORM.

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Roadmaps: An Effective Issue-Based Planning Process, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. Nick Suttora, p1567-1571

see Aiken, Richard J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1555-1558

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Drake, Richard M.
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Drake, Thomas G.

Computer Simulation of Granular Flows, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p752-755

Draper, Stephen E. Increasing Safety Downstream of Hydropower Facilities, CF Nov. 91, p239-250 disc: Oswald Rendon-Herrero, CF Nov. 92, p276-

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Drotning, William D.
Graphical Models for Simulation and Control of Robotic
Systems for Waste Handling, (High Level Radioactive
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Management Program Committee, 1992), with Phil C.
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Drumm, Eric C.
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An Innovative Institutional Arrangement Which Incorporates the Risk Preferences of Water Users, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p174-199

Duffy, M. A.

Development of Functional Requirements for a Moni-tored Retrievable Storage Installation, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with T. A. Mozhi, P. N. Kumar and W. A. Lemeshewsky, p1867-1879.

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Human Exploration of Mars: The Role of a Mars Outpost Laboratory, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p43-47

Lunar Oasis, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with John Niehoff, p48-68

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Dunbar, W. Scott disc. (of Geotechnology: An Environment of Change, by Jean-Yves Perez, CE Dec. 91, p44-45), CE Mar. 92, p35-36

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err: GT Mar. 92, p519

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Soil Strengths from Back Analysis of Slope Failures, (Stability and Performance of Slopes and Embankments II,
Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), with Timothy D. Stark, p890-904

State-of-the-Art: Static Stability and Deformation Analysis, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), p222-266

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Dunn, David D.

System Operating Strategies in Water Rights Modeling and Analysis, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), with Ralph A. Wurbs, p498-503

United States Geological Survey Bridge Scour Evaluation Program in Texas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Henry R. Hejl, Jr., p82-84

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Sherard Contributions, Sukhanander Singh, ed.,
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see Sherard, James L., (Embankment Dams—James L.
Sherard Contributions, Sukhanander Singh, ed.,
1992), p285-300

1992), p285-300
see Sherard, James L., (Embankment Danus—James L.
Sherard Contributions, Sukhanander Singh, ed.,
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see Sherard, James L., (Embankment Danus—James L.
Sherard Contributions, Sukhanander Singh, ed.,
1992), p384-402
see Sherard, James L., (Embankment Danus—James L.
Sherard Contributions, Sukhanander Singh, ed.,
1992), p411-441

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Duric, Nebojsa
Very Low Frequency Radio Astronomy from Lunar Orbit, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1925-1934

D'Urso, Gary J.

Quarry Inspection: A Geological Perspective, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p185-

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Pressure of Crushed Ice as Mohr-Coulomb Material Against Flat, Axisymmetric Indentor, CR Dec. 92, pl 39-151

Dutt, Rathindra N.

Cyclic Behavior of a Deepwater Normally Consolidated Clay, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), with Earl H. Doyle and Richard S. Ladd, p346-559

Dutta, Piyush K

Dutta, rryush a... Measurement of Shock Pressure from FWD on a Concrete Pavement by Impedance-Matched Shock Gauge, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with John Kalafut, p213-228

Duttenhoeffer, Richard Cost and Quality Management, ME Apr. 92, p167-175

see Gajer, Grzegorz, ST June 90, p1696-1714 see Muller, John F., ST Feb. 92, p359-376

Dwarakanath, H. V.

Deformational Behavior of Fiber-Reinforced Concrete Beams in Bending, with T. S. Nagaraj, ST Oct. 92, p2691-2698

Dwyer, John P.
California's Tradable Emissions Policy and Greenhouse
Gas Control, EY Aug. 92, p59-76

Dwyer, Margaret L. see Siegel, Gary W., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p151-156

yess, James W.

e Dorsey, John T., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p921-932

Dyke, Darrell see Weghorst, Paul A., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed.,

see Weghorst, Paul A., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p369-374

1972), p309-319
Dykes, Rassell S.
Integrated Remediation of Soil and Groundwater, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Arlin C. Howles, p244-249
see La Breche, Carol L., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p555-560

Dzurik, Andrew see Leitman, Steve, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p407-412

Ealing, C. J. see Grant, J. S. ant, J. S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2227-2234

Essa, Said M.

Estimating Earthwork Volumes of Curved Roadways:
Mathematical Model, TE Nov./Dec. 92, p834-849

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Probabilistic Design of Open Drainage Channels, IR

Nov./Dec. 92, p868-881

disc. (of Cut and Fill Calculations by Modified AverageEnd-Area Method, by James W. Epps and Marion W.

Corey, TE Sept./Oct. 90, p683-689), TE July/Aug. 92,

disc. (of Estimatine Pit. Francestica V. June 1988-1988).

sc. (of Estimating Pit-Excavation Volume Using Cubic Spline Volume Formula, by Chun-Sung Chen and Hung-Cheng Lin, SU May 91, p51-66), SU May 92, p66-67

Sec. (of Normal-Depth Calculations in Complex Channel Sections, by Edward D. Shirley and Vicente L. Lopes, IR Mar./Apr. 91, p220-232), IR Sept./Oct. 92, p834-

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p383-b01, 12 1838-1838. [Ports '92, David Torseth, ed., 1992), p203-213 see Harned, James A., [Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p356-361

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Easterling, J. Bennett

Emerring, 3. Beanett Implementation of the Department of Energy's New American Indian Policy within the Civilian Radioactive Waste Management Program, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Beth Berlin, p161-165

Easterling, W. Samuel Strength of Composite Slabs, with Craig S. Young, ST Sept. 92, p2370-2389

Eaton, Harvill C.

see Roy, Amitava, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p104-115

Eaton, Robert A.
see Janoo, Vincent C., ed., Road and Airport Pavement
Response Monitoring Systems

Ebeling, Robert M.

Finite Element Analysis of Slopes with Layer Reinforce-ment, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with John F. Peters and Reed L. Mosher, p1427-1443

Ebeltoft, Richard A.
Computer Modeling of Structural Systems for Residential
Scale Buildings, (Housing America in the Twenty-First
Century, Mehmet Inan, ed., 1992), p58-65

Eberhardt, Ralph N.
see Schulz, Jon R., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2023-2034

Ebert, William I

A Comparison of Glass Reaction at High and Low SA/V: PCT Vs. MCC-1, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with John K. Bates, p934-942

Eble, Robert G.
see Ashe, Kenneth L., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p2056-2061

Ebrahimpour, A.
Design Live Loads for Coherent Crowd Harmonic Move-ments, with R. L. Sack, ST Apr. 92, p1121-1136
A Fatigue Reliability Model for Railway Bridges, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), with E. A. Maragakis and S. Ismail, p320-323

Echeverry, Diego

Ecusevery, Diego
Weather Advisor System for Construction Duration Estimation: Potential of Integrating KBS's and CD-ROM
Databases, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), with Moonja P. Kim, p833-840

Eck, Ronald W.

Developing a Civil Engineer for the 21st Century, El Apr. 90, p156-163
disc: Ravindra M. Srivastava, El Apr. 92, p211-212
clo: El Apr. 92, p212

Eckmann, Donald E. Turning on the Waterworks, CE Aug. 92, p48-51

Meteorological Aspects of Drought, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p329-333

Edgar, Thomas V.

see Swift, Daniel P., CR June 92, p41-57

Edge, Billy L.

The Landfall of Hurricane Hugo, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Ben L. Sill and Orville T. Magoon, p988-

Edil, Tuncer B.

East, tancer B.
Interaction of Inorganic Leachate with Compacted Pozzolanic Fly Ash, with Linda K. Sandstrom and P. M.
Berthouex, GT Sept. 92, p1410-1430

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Edisger, John Eric

Problems in Hydrothermal Analysis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Edward M. Buchak, p164-169

Edris, Earl V., Jr.
UTEXAS3 Example Problems, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Dale F. Munger, p1066

Edwards, B.

A Forecasting Model of Gaming Revenues in Clark County, Nevada, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. Bando, G. Bassett, A. Rosen, J. Carlson and C. Meenan, p943-948

Edwards, B. K.

see Hemphill, R. C., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p582-586

Edwards, Carl M.

see Orsi, Thomas H., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p968-982

Edwards, R. E.

see Marra, S. L., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p917-924

Effler, Steven W.

see Tsay, Ting-Kuei, HY Mar. 92, p407-419

Egan, Gregory K.
see Tang, Siong K., (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p770-777

Egan, Howard

Site Qualification for Inclinometer Surveyng Using Tiltmeters, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Gary R. Holzhausen and Dan Sampson, p538-551

Egan, John A. Egan, John A.

Seismic Repair at Seventh Street Marine Terminal,

(Grouting, Soil Improvement and Geosynthetics, Roy H.

Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,

1992), with Robert F. Hayden, Larry L. Scheibel,

Mahmut Otus and Gerald M. Serventi, p867-878

Egly, Diane

see Baumann, Duane D., (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p117-134

osi, Nathiel G.

Mixed Broken Glass Processing Solutions, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p71-80

Eguchi, Ronald T.

puch, Romand 1.

A Assessment of Environmental Costs Associated with Crude Oil Pipeline Damage Caused by Earthquakes, (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), with Susan D. Pelmulder and Hope A. Seligson, p153-167

Eheart, J. W

see Garrett, J. H., Jr., (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p259-267

Ehrenstrasser, G.
see Krejsa, P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl491-1493

Ehsani, M. R.

Confinement Steel Requirements for Connections in

Ductile Frames, with J. K. Wight, ST Mar. 90, p751-

disc: Mario Rodriguez and Robert Park, ST May 92, p1422-1423
clo: ST May 92, p1423
see Li, M. W., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p677-690

see Tao, S., (Materials: Performance and Prevention of De-ficiencies and Failures, Thomas D. White, ed., 1992), p598-605

Elckhorst, Anson G. disc. (of Trouble on the Waterways?, by Paul Tarricone, CE Feb. 91, p52-55), CE Jan. 92, p28

Eid, Hisham T.

see Stark, Timothy D., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p876-889

di, David

Williams, Kyle, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p260-

System Selection of Concepts for Direct Disposal of Spent Fuel, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), with K. D. Closs and U. Knapp, p1860-1866

knapp, p. 1800-1800 see Peehs, M., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1181-1187

Einstein, Herbert H.

see Schwartz, Charles W., (Computing in Civil Engineer-ing and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-375

Einziger, R. E.

Oxidation of Spent Fuel in Air at 175° to 195°C, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), with L. E. Thomas, H. C. Buchanan and R. B. Stout, p1449-1457

Eisenberg, Don

see Thompson, Ken, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138

Elsenberg, N. A., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2145-2150

Eisenhauer, D. E.

see Enciso, J. M., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p244-249

El Daw, Ahmed K.

see Hussein, Ahmed S. A., IR Nov./Dec. 89, p1018-1033

El Ghoche, H.

Plastic Waste for Low-Weight Embankments, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with C. Coulet and D. Daudon, p1368-1379

El Haddad, M. H.

see Akl, Adel Y., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p276-279

Elahi, S. Manzi

Traffic Signal Using Mixed Controller Operations, with A. Essam Radwan and K. Michael Goul, TE Nov./Dec. 92, p866-880

El-Bibany, Hossar

see Paulson, Boyd C., Jr., (Computing in Civil Engineer-ing and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p348-355

El-Bkaily, Marwan

Load Shortening in Plastic Buckling of Cylinders, with Ralf Peek, EM Sept. 92, p1892-1906

see Serre, Marc, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p766-771

Eldin, Neil N.

Management of Engineering/Design Phase, CO Mar. 91, p163-175

disc: Richard L. Werner, CO June 92, p416-417 clo: CO June 92, p417-418 Use of Scrap Tires in Road Construction, with Ahmed B. Senouci, CO Sept. 92, p561-576

Eleazer, William E.

Pavement, (Visitable L., Technologies for Utilization of Waste Tires in Asphalt Pavement, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Morton A. Barlaz, p193-201

El-Elwany, Mostafa

Settlement and Moisture Movement in Collapsible Soils, with Sandra L. Houston, GT Oct. 90, p1521-1535 disc: Yakov M. Reznik, GT Apr. 92, p656-658 clo: GT Apr. 92, p658

see Houston, Sandra L., GT May 91, p731-752

Eletti, G. F. Return to Italy of Vitrified High Level Wastes from U.K.:
Operational and Regulatory Aspects, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with F. P. Michetti and M. Tocci, p.256-262

Elgamal, Ahmed-Weell M.

La Villita Dam Response During Five Earthquakes Including Permanent Deformation, with Ronald F. Scott, Mohamed F. Succarieh and Liping Yan, GT Oct. 90, p1443-1462

disc: Robert B. Jansen, GT Apr. 92, p648-650 clo: GT Apr. 92, p651-653

Elgamal, A.-W.
Three-Dimensional Seismic Analysis of La Villita Dam,
GT Dec. 92, p1937-1958

El-Gamal, Mahmoud see Siddharthan, Raj, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p51-54

Elgar, Steve Laboratory Simulations of Directionally Spread Shoaling Waves, with R. T. Guza, M. H. Freilich and M. J. Briggs, WW Jan./Feb. 92, p87-103

Bi-Gazairty, Loai

Nonlinear Dynamic Analysis of RC Structures with Precast Cladding Using GT-IDARC, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), with Barry Goodno and James Craig, p896-904

Elgharib, Hesham M.

see Kangari, Roozbeh, CO June 92, p349-361

El-Hakim, Omnia

Velocity Distribution Inside and Above Branched Flexi-ble Roughness, with Mohamed M. Salama, IR Nov./ Dec. 92, p914-927

Eli, Robert N.

EAI, ROBERT N. Automated Diffusion Wave Modeling of Watershed Hydraulics, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p353-354

see Smith, Jason, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p56-61

Eliakim, D.

Housing—Economic Standard, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p66-74

Elias, Victor see Juran, Ilan, GT Jan. 90, p54-72

Eliason, D. E. see Sheng, Y. Peter, (Estuarine and Coastal Modeling, see Sheng, Y. Peter, (Estuarine and Coastal Modeling, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p105-115

Ellezer, Zwy see Haase, Paul W., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p813-827

see Bažant, Zdeněk P., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p490-493

Elishakoff, Isaac

see Zhang, Ruichong, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p196-199

El-Jabi, N.

Stage-Discharge Relationship in Tidal Rivers, with G. Wakim and S. Sarraf, WW Mar./Apr. 92, p166-174

El-Jabi, Nassir see Ashkar, Fahim, (disc), WR May/June 91, p367-382

See Chang, A. C., (Hydraulic Engineering: Saving a see Partneatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p132-137

see Ward, Matthew O., (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p41-62

Elkordy, M. F.
Neural Network Based Classifiers in Vibrational Signature Analysis, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with K. C. Chang and G. C. Lee, p1066-1073

Ellegaard, A. Christina

A PC Modelling System for the Simulation of Transport and Fate of Solutes and Suspended Substances, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Jesper Weiergang and Helmer M. Petersen, p188-201

Ellegaard, Ann Christina see Vested, Hans Jacob, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p317-331

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see Bjorhovde, Reidar, (disc), ST May 90, p1230-1246

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see Islam, M. Saiful, ST Jan. 92, p813-827
see Rosowsky, David, ST Mar. 92, p813-827
see Srinivasan, Mukund, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p388-391

Ellingwood, Bruce R.

see Rosowsky, David V., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p78-81

Elliott, Ronald L. ETBC: Interactive Software for Blaney-Criddle Estimates of Evapotranspiration, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Eldon L. Johns and Paul A. Weghorst, pl 34-139

Ellis, Carl B.

Implementing the Payments-Equal-to-Taxes (PETT) Program in Nevada, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Cindy L. Rogers, Program Co p2207-2211

Ellis, Glenn W.

Ellis, Glenn W.
Chemical Dosing of Small Water Utilities Using Regression Analysis, with Anthony G. Collins, Xi Ge and Catherine R. Ford, EE MayJune 91, p308-319 disc: Steven K. Dentel, EE Nov./Dec. 92, p996-999 clo: EE Nov./Dec. 92, p999-1001
Neural Network Modeling of the Mechanical Behavior of Sand, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Chengwan Yao and Rongda Zhao, p421-424

Ellis, J. Hugh

see Tao, Zongwei, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p539-542

see Zimmerman, James J., (disc), ST Dec. 90, p3475-3496

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Ellis, Ralph D., Jr.

Construction under Fire, CE Nov. 91, p51-53 disc: Leonard Sklar and Ed Maurer, CE May 92, p35 clo: CE May 92, p35-36 disc: Ed Maurer, CE Nov. 92, p33-34

Ellis, William H.

see Statler, VirLynda, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1985-1990

disc. (of Effect of Soil Plasticity on Cyclic Response, by Mladen Vucetic and Ricardo Dobry, GT Jan. 91, p89-107), GT May 92, p829-830

Ellstein, Abraham disc. (of The Mechanical Aging of Soils, by John H. Schmertmann, GT Sept. 91, p1288-1330), GT Dec. 92, p2012-2013

El-Marsafawi, H.

Dynamic Experiments on Two Pile Groups, with Y. C.

Han and M. Novak, GT Apr. 92, p576-592

The Superposition Approach to Pile Group Dynamics, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with A. M. Kaynia and M. Novak, p114-135

see Richards, R., Jr., GT July 92, p996-1011

Elnawawy, Omar A. see Hamid, Ahmad A., ST Dec. 92, p3377-3393

El-Rayes, Hamdy H.

see Jacquez, Ricardo B., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p327-333

Exisons Learned from Compacted Clay Liner, with David E. Daniel, Gregory A. Sraders and David C. Anderson, GT Nov. 90, p1641-1660 disc: Wesley G. Holtz, GT Apr. 92, p660-662

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Elsworth, Derek Flow-Deformation Response of Dual-Porosity Media, with Mao Bai, GT Jan. 92, p107-124

see Oloufa, Amr A., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p590-597

Eltzholtz, Robert H.

see Russell, Thomas S., Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941

Elvin, Alex A. see Sunder, S. Shyam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p429-432

ni, Flora

see Gottlieb, Peter, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1349-1358

ett, C. Harold

see Reddi, Lakshmi N., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p575-580

Emptage, Michael R.
A Stochastic Model for Crack Initiation and Fatigue Life, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Bevil J. Shaw, p308-311

Sandaw, potential Sandaw, pote

Enders, Paul A

see Peters, Dale T., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p366-376

Engel, David W.

ource-Term Calculations for a Total Systems Analysis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1758-1764

Engelhardt, M. D.

Experimental Performance of Long Links in Eccentrically Braced Frames, with E. P. Popov, ST Nov. 92, p3067-

Stability of Beams in Eccentrically Braced Frames, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with K. C. Tsai and E. P. Popov, p1043-1046

ingels, B. P.

disc. (of Proposal for Structural Design Peer Review, by Rubin M. Zallen, CF Nov. 90, p208-215), CF Aug. 92, p188-189

Engelund, S.
Comparison of Some Importance Sampling Techniques in Structural Reliability, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with R. Rackwitz, p108-111

Experiences with Experimental Design Schemes for Failure Surface Estimation and Reliability, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with R. Rackwitz, p252-255

Engemoen, William O.
Lee Wilson, John A., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653-668

Ross W. Boulanger, ed., 1992), p53-608

Englehardt, James D.
An Event Size Probability Distribution for Risk Analysis, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p23-237

Identifying Promising Hazardous Waste Reduction Technologies, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p139-144

Information Theory in Risk Analysis, with Jay R. Lund, EE Nov/Dec. 92, p890-904

English, Deborah
Coal-Gas Conundrum, with Carol Whitlock and Dean
Hargens, CE Mar. 92, p49-51

Hargens, CE Mar. 92, p49-51
Engman, Edwin T.
Introduction to Remote Sensing for Irrigation and Drainage, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Richard H. Cuenca, p529-534
see Shih, Sun F., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p535-540
see Shih, Sun F., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p547-552

Engman, Ted Irrigation and Drainage: Saving a Threatened Re-source—In Search of Solutions, 1992, 0-87262-877-9, 634pp.

Eaneking, T. J.
Discrete Markov Process Approach to Fatigue Crack Growth, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with B. F. Spen-cer, Jr., p792-795

Enriquez, Apollo S. see Bergado, Dennes T., GT July 92, p1012-1030

Epps, James W

e.pps, James W.
Computerized Solution for Signalized Intersection Service Volumes, TE July/Aug. 92, p496-516
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disc: Said M. Easa, TE July/Aug. 92, p600-601

Epstein, Howard I.

Why Four Years?, El Apr. 91, p150-154
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clo: El Oct. 92, p426
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Bruce E. Marsh, El Jan. 90, p56-60), El Apr. 92, p197198

Erber, Thomas see Guralnick, Sidney A., ST June 91, p1815-1833

Ercoli, F.

see Giovagnoli, M., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-213

Erdman, Lee see Bradburn, James H., (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p192-198

Erdmann, John B. disc. (of Delta Method for Estimating Primary Produc-tion, Respiration, and Reaeration in Streams, by Steven C. Chapra and Dominic M. Di Toro, EE Sept./ Oct. 91, p640-655), EE Nov./Dec. 92, p1003-1006

Erdos, Lawrence I.

Design Criteria and Specifications for Pipeline Rehabili-tation Projects, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p742-747

Ethical, Legal and Professional Responsibilities of Eng neers to Owners and Contractors, (Coastal Engineerin Practice '92, Steven A. Hughes, ed., 1992), p989-1002

Ergenzinger, Peter disc. (of Boundary Shear Stress and Roughness Over Mobile Alluvial Beds, by Peter J. Whiting and William E. Dietrich, HY Dec. 90, p1495-1511), HY May 92, p818-821

Ergün, Gökmen disc. (of Estimating Accident Benefits of Reduced Free-way Congestion, by Edward C. Sullivan, TE Mar./Apr. 90, p167-180), TE May/June 92, p474

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Design and Performance of Two Port Silos on Improved
Ground, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p842-854

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Mound Breakwaters, Orville T. Magoon, ed. and
William F. Baird, ed., 1992), p115-136

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Erwin, C. S.

Conceptual Design of a Monitored Retrievable Storage
Cask Employing Yucca Mountain Containers, High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), with D. R. Jackson, J. R. Oliver, M. S. Aljohani
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Espejo, J. M.

Spanish High Level Radioactive Waste Management System Issues, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. R. Beceiro, p18-24

Espey, W. H., Jr.

Espey, W. H., Jr.

FAA Storm Water Program, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Raymond Rose and George I. Legarreta, p940-945

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a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p30-35

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a, R.

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see Chung, Paul Y., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p220-225

Ettouney, M.
see Benaroya, H., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, pl-12
see Benaroya, H., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p276-283
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Ectousey, Mohammed M.

Regolith Dynamics, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Struction, and Russell J. Miller, ed., 1992), with Haym Benaroya, p1379-1388

Regolith Mechanics, Dynamics, and Foundations, with Haym Benaroya, AS Apr. 92, p214-229

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Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), with Jeffrey
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Evans, Charles H., III. see Smith, Gary W., (Ports '92, David Torseth, ed., 1992), p630-643

Evans, Frederick W. disc. (of A New Look at Galvanized Bridges, by Rita Robison, CE July 91, p52-55), CE Nov. 91, p30

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City and County of Denver Approach to Management Requirements, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p164-169

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Evans, John R.

Teleseismic Tomography of the Yucca Mountain Region:
Volcanism and Tectonism, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with Moses
Smith, III., p2372-2380

Evans, Mark D.

Density Changes During Undrained Loading— Membrane Compliance, GT Dec. 92, p1924-1936 Membrane Compliance and Liquefaction of Sluiced Gravel Specimens, with H. Bolton Seed and Raymond B. Seed, GT June 92, p856-872

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see Davis, Jack E., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p350-355

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see Zlotsky, Amy, (Water Resources Planning and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p474-479

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see Taghavi, S. Alireza, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p332-337

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verts, Craig H.

Design Considerations for Small Artificial Islands in Franks Tract, California, (Coastal Engineering Practice 92, Steven A. Hughes, ed., 1992), with Vedat Demirel, Russell H. Boudreau, Emy T. Carpenter and Richard Domhelm, p779-793

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Representing Building Product Information Using Hy-permedia, with Sari Khayyal and Victor E. Sanvido, CP Jan. 92, p3-18

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Aspects of Parallel Processing in Reservoir Simulation,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), with Patrick O'Leary and
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Ewing, Rodney C.
The Role of Natural Analogues in Performance Assessment: Applications and Limitations, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1429-1436

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Radiation Measurements for Verifying the Loading of Burnup Credit Casks, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2161-2164

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Computer Modeling of Forced Mixing in Waste Storage
Tanks, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with T. E. Michener, p636-642

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s, Brian D.

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Fach, Roland

Computer-aided Studies for the Optimum Regulation of a Channel Network, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Géraud Soubrier, p1112-1117

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Fagherazzi, Laura
Maximum and Minimum Storage Trajectories That Meet
Specific Risk Levels, (Risk-Based Decision Making in
Water Resources V, Yacov Y, Haimes, ed., David A,
Moser, ed., and Eugene Z, Stakhiv, ed., 1992), with
Jean-Claude Rassam and André Turgeon, p284-303

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Fahmy, Mohamed W.

Nonlinear Dynamic Response of Framed Structures
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Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), with Ahmad H. Namini, p457-

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Photogrammetric Solution for Vehicle-Damage Investiga-tion, with F. R. Wilson, D. King and T. Y. Shih, TE Nov./Dec. 92, p850-865

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see Mysore, R. K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p733-736

Fallgren, Richard B. see Hadjian, Asadour H., (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p1-26

see Carmichael, A. Douglas, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p182-212

Falsone, G.

On the Approximated Solution of Non-Linear Systems Under Non Gaussian Excitations, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with M. Vasta, pl 40-143

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disc. (of The Debate Over Large Dams, by Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48), CE Dec. 91, p32

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Reservoir Sedimentation. I: Delta and Density Current Deposits, with Gregory L. Morris, HY Mar. 92, p354-369

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Analytical Solutions for Thick, Doubly Curved, Laminated Shells, with Juyong Zhang, EM July 92, p1338-1356

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Hydraulic Risk of Flood Disaster Reduction at Dams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1922), p549-556

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Laboratory Investigation of Beach Profiles in Tailings Disposal, with Jacob Masliyah, HY Nov. 90, p1357-1373

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clo: ST Mar. 92, p861-862

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an, Steve

Fangmann, Steve
Nassau County Sludge Management Multi-Phased Environmental Assessment, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with John Pascucci, Thomas immerso, Carl Koch and Darlene McKinney, p269-274

Fanjiang, Guang-Naa Tunnel Takes Cathodic Protection, with Michael Mazzu-ca, Lin Nathan and Robin Pawson, CE Nov. 92, p59-61

Geosynthetic Strength—Ultimate and Serviceability Limit State Design, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with S. Hermann, p1411-1426

Fanning, Daniel P. disc. (of Building Better Bridges: Concrete Vs. Steel, by Clifford L. Freyermuth and Andy Johnson, CE July 92, p66-71), CE Dec. 92, p30

Faravelli, Lucia

Faraveill, Lucia
Stochastic Dynamics of Hysteretic Systems, (Probabilistic
Mechanics and Structural and Geotechnical Reliability,
Y. K. Lin, ed., 1992), with Paolo Vennin, p53-56
Stochastic Finite Elements and Reliability Analysis,
(Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p45-48

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Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Force on Slab Beneath Hydraulic Jump, with Ran-gaswami Narayanan, HY Jan. 91, p64-82 disc: Willi H. Hager, HY Apr. 92, p666-667 clo: HY Apr. 92, p668

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Farley, Gary L. Crushing Response of Energy Absorbing Composite Structure, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p876-879

Farmer, Justin F.

Access Control to Projects Via Raised Islands, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p77-81

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Design of Geosynthetic-Reinforced Soil Structures,
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Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), with L. Juran, p1188-1200

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Farran, Hany J.

Computer Analysis of the East Huntington Cable-Stayed Bridge, (Computing in Civil Engineering and Geograph-ic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with William Lai,

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Elements and Structures, Farhad Ansari, ed. and
Stein Sture, ed., 1992), p82-93

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Water Demand Management in the Las Vegas Valley Region, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Nick Braybrooke, p44-49

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Evolving Mitigation Requirements for Port Develop-ment, (Ports '92, David Torseth, ed., 1992), with Mark Easley and David C. Carpenter, p203-213

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On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p143-151

grain Communications with Remote Sensing, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with H. A. Franklin, p586-596

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Kenneth D. Hansen, ed. and Francis G. McLean,
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see Wong, Noel C., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed.,
1992), p440-458

Felice, C. W.

Computerized Tomographic Analysis of Fluid Flow in Fractured Tuff, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. C. Sharer and E. P. Springer, p296-299

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Level Radioactive Waste Management Program Committee, 1992), with John K. Bates, p925-933

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Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p89-96

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Rossman, ed., 1992), p169-189
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Fereres, Elias

Greenhouse Irrigation Technology Transfer in Spain, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Francisco Orgaz, Nicolas Castilla and Jose Lopez, p215-220

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The Isolated Signalized Intersection as a Mitigation on a High-Speed Highway, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with A. Reed Gibby and Simon P. Washington, p57-61

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Thermal Stresses in Bi-Coated Structures, with Luca Lut-terotti, EM Sept. 92, p1928-1938

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Inelastic Response of Variable Stiffness Members under Cyclic Loading, with Chin T. Lee, EM July 92, p1406-1422

Fessenden, Franklin W.

Hampton, New Hampshire: Beach Nourishment Project, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p60-72

Fester, Dale A

see Morgenthaler, George W., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1720-1727

Fetzer, Claude

disc. (of The Human Factor in Failures, by George F. Sowers, CE Mar. 91, p72-73), CE Apr. 92, p32

Fewell, M. E.

Applications of Performance Assessment in Support of the Exploratory Studies Facility (ESF) Design, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), with S. R. Sobolik, J. H. Gauthier, L. E. Shephard and L. S. Costin, p665-670

Feyen, Jan see Liu, Fubo, IR Sept./Oct. 92, p674-689

Fleber, Joseph P. see Moore, Gary T., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p224-

Fieber, Julie

Characteristics of MOBILE4 and EMFAC7E Models, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), with Barbara Austin and Jeremy Heiken, p255-570

Fleber, Julie L. see Ireson, Robert G., (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p142-160

Orthometric Heights from Global Positioning System, SU Aug. 92, p70-79

Fiedler, William

see Bruce, Donald A., CE Dec. 91, p40-43

Fifth Engineering Foundation Conference on Risk-Based Decisionmaking in Water Resources Summary of Responses to Participant Questionnaire, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p360-371

Figueroa, J. Ludwig see Tavakoli, Amir, TE Mar./Apr. 92, p270-280 see Acosta, J. Adolfo, (disc), TE May/June 90, p287-298

see Kuo, S. S., (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p794-

Filatovs, Juri

See Lee, Gordon K. F., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-1009

Finite-Strip Free-Vibration Analysis of Wood Floors, with B. Folz and R. O. Foschi, ST Aug. 90, p2127-2142 disc: I. Smith and Y. H. Chui, ST May 92, p1428-1430 ST May 92, p1430-1431

clo:

FINOS, John See Ahmed, Shabbir, HY Feb. 92, p306-322 see Mena, Maria Pia, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p417-422

Finch, Edward

disc. (of Evaluation of New Building Technology, by James D. Lutz, Luh-Maan Chang and Thomas R. Napi-er, CO June 90, p281-299), CO Mar. 92, p208-210

Uranyl Oxide Hydrates and Uraninite Corrosion: Relevance to "Natural Analogue" Studies of Spent Fuel Corrosion, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. C. Ewing, p332-337

Finch, Ralph Coarse-Grain Parallel Computing Using ISIS Tool Kit, with Shao-Kong Kao, CP Apr. 92, p233-244

Findell, Kirsten L.

Stochastic Modelling of Strong Ground Motions for the Istanbul, Turkey Area from Seismic Data for the Surrounding Region, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Ahmet S. Çakmak, p.268-271

Findikaki, Irene

Use of GIS Technology for the Analysis and Visualization of Arsenic Concentration in Soils, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p443-451

Findikakis, Angelos N.
Use of Fractal Geometry Concepts in the Simulation of Ground Water Flow and Transport Processes, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p33-38

Findler, Nicholas V.
Distributed Approach to Optimized Control of Street
Traffic Signals, with John Stapp, TE Jan./Feb. 92, p99-

Fine, Stephen see Boudreau, Russell H., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p447-461

Finn, Lyle Offshore Structures—Past, Present, and Future, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p218-242

Response of Model Pile Groups to Strong Shaking, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with W. Blair Gohl, p27-55 see Yogenfrakumar, Muthucumarasamy, GT Aug. 92, p1158-1167

Finney, Brad A. Quasi-Three-Dimensional Optimization Model of Jakar-ta Basin, with Samsuhadi and Robert Willis, WR Jan./ Feb. 92, p18-31

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Finnie, John I.

Finale, John I.

Solving Turbulent Flows Using Finite Elements, with Roland W. Jeppson, HY Nov. 91, p1513-1530
disc: H. Suresh Rao and S. Sankaranarayanan, HY Dec. 92, p1698-1700
clo: HY Dec. 92, p1700-1701

Finnigan, Timothy D.

Current Blockage Effects on Model-Scale Offshore Platform, (Civil Engineering in the Oceans V, Robert T.

Hudspeth, ed., 1992), p294-310

Hudspeth, ed., 1992, p.294-310

Finno, Richard J.

Analysis of Performance of Pile Groups Adjacent to Deep Excavation, with Samir A. Lawrence, Nabil F. Allawh and Indra. S. Harahap, GT June 91, p934-955 disc: John S. Horvath, GT Sept. 92, p1481 clo: GT Sept. 92, p1481-1482

Deep Cuts and Ground Movements in Chicago Clay, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p119-143

Kinematically Unconstrained Compression of Soft Clay, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Yongheun Rhee, p143-157

Stress-Strain-Strength Responses of Compressible Chicago Glacial Clays, with Choong-Ki Chung, GT Oct. 92, p1607-1625

Fiori, C. A.

see Bredariol, A. W., (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p360-364

disc. (of Optimum Location of Drains in Concrete Dams, by A. S. Chawla, R. K. Thakur and Akhilesh Kumar, HY July 90, p930-943), HY Apr. 92, p644-647

Floretto, Virgilio Fluctuating Uplift and Lining Design in Spillway Stilling Basins, with Andrea Rinaldo, HY Apr. 92, p578-596

Firmage, D. Allan

disc. (of Tort Reform and Design Professional, by Dennis R. Schapker, El July 90, p258-265), El July 92, p316-317

see Kou, Chang-Huan, ST Oct. 92, p2890-2910

Firman, Dennis

Roof Management Alternatives for Aging Launch Infra-structure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2056-2063

Fischbeck, Paul S.

see Paté-Cornell, M. Elisabeth, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p200-218

Fischer, Gary W. Nonmonetary Incentives: It Can be Done, with Norman P. Nunn, ME Jan. 92, p40-52

Fischer, Joseph A.

Exploration/Grouting in Cambro-Ordovician Karst,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and lian Juran, ed.,
1992), with Richard W. Greene, Joseph J. Fischer and
Frank W. Gregory, p350-359

Fischer, Joseph J.
see Fischer, Joseph A., (Grouting, Soil Improvement an
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and llan Juran, ed., 1992), p350-359

Fischman, Robert A.
Post-tensioned Cables Have Stabilized Before (ltr), CE July 92, p32

Fisher, John W

Fatigue Strength of Riveted Bridge Members, with Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981 disc: Geoffrey L. Kulak, ST Aug. 92, p2280-2281 clo: ST Aug. 92, p2281-2282

Fishman, K. L. see Lee, Scung W., (Grouting, Soil Improvement as Geosynthetics, Roy H. Borden, ed., Robert (Holtz, ed. and Ilan Juran, ed., 1992), p1356-1367

Fitzpatrick, Kay see Mason, John M., Jr., TE Mar./Apr. 92, p281-298

Fiuzat, Abbas A. Comparative Survey of Four Unsaturated Soil Flow Equations, with David W. Moughton, HY May 92, p786-791

Fixed Rail Service to Airports Subcommittee of the ASCE Landside Committee

Fixed Rail Service to Airports: Bibliography, (Interna-tional Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p232-234

Fleet, Christopher R.

Fleet, Carissiopher R. VMT for Air Quality Purposes, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), with Patrick DeCorla-Souza, p126-141

Fleischmann, Nikolaus

Retectionants, Visionana
Knowledge-Based Systems in Structural Engineering in Germany, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Martina Schnellenbach, p558-565

On Knowledge Representation and Knowledge Acquisi-tion in Structural Engineering, (Computing in Civil En-gineering and Geographic Information Systems Sympo-sium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Adam Borkowski, p402-409

Fleming, Beth C.
Properties of Solidified/Stabilized Chromium Contaminated Soil, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with M. John Cullinane, Jr., p1204-1209
see Zappi, Mark E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1184-1189

Fleming, G. see Banks, M. K., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p463-467

Fleming, Robert L., Jr. see Sills, George L., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1382-1394

Fletcher, Desmond see Issa, Raja R. A., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1074-1081

An Ocean Engineering Program for the 21st Century, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with J. E. Flipse, p370-380

Flewelling, J. W.

see McCarthy, E. J., IR Mar./Apr. 92, p242-255

Radioclements and Their Occurrence with Secondary Minerals in Heated and Unheated Tuff at the Nevador Trest Site, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with H. A. Wollenberg, pl 1993-1598

Flick, Loren D.

Minipile Milestone in Memphis, with A. E. "Ted" Gra-ham, Michael J. Marasa, Nigel B. R. Osborn and Frank T. Tobey, III., CE Sept. 92, p46-49

see Wittwer, C. S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271

see Rautman, Christopher A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1617-1624

see Wittwer, C. S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271

Verification of an Alluvial Fan Drainage Design Methodology for Transportation Alignments, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Richard H. French, p575-

see Fletcher, L. S., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p370-380

Flood, Walter E.

Impact of the New Denver Airport on the Air Traffic Control System, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992),

Flory, John F.

Fiber Ropes for Ocean Engineering in the 21st Century, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), with Henry A. McKenna and Mike R. Parsey, p934-947

Flueck, John A.

A Bayesian Reliability Approach to the Performance As-sessment of a Geological Waste Repository, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), with Ashok K. Singh. 21625-1632

Probabilistic Assessment of Spent-Fuel Cladding Breach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Y. R. Rashid and K. D. Seager, p1018-1025

see Barrett, P. R., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p407-422

Fogg, Graham E.

see Loaiciga, Hugo A., HY Jan. 92, p11-37

Fohrell, William B.

see Cramer, Steven M., ST Oct. 90, p2729-2746

Fokwa, D.

730

Fokwa, D. Experimental Determination of the Relation Between the Damaged Zone and the Aggregate Size in Concrete Through Acoustic and Mechanical Techniques, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Y. Berthaud and D. Breysse, p.131-134

see Breysse, D., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p171-174

Foland, K. A.

Found, A. A. Temporal and Spatial Distribution of Basaltic Volcanism in the Pancake and Reveille Ranges North of Yucca Mountain, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with S. C. Bergman, p2366-2371

Folberth, Paul J. disc. (of The Debate Over Large Dams, by Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48), CE Nov. 91, p30

Follente, Greg C.
Design of Notched Wood Beams, with Thomas E.
McLain, ST Sept. 92, p2407-2420

see Filiatrault, A., ST Aug. 90, p2127-2142

Fondshl, John W.
The Development of the Construction Engineer: Past
Progress and Future Problems, CO Sept. 91, p380-392
disc: Harry Lischer, Jr., CO Dec. 92, p824-825

Fong, H. see Roth, W. H., (*Ports '92*, David Torseth, ed., 1992), p336-349

elies, Mikael

Determination of Fracture Toughness for Wood, with Kirsti Riipola, ST July 92, p1727-1740 see Riipola, Kirsti, ST July 92, p1741-1750

Fontaine, Thomas A.

Contaminated Sediment Transport During Floods, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p210-212

Fontage, Darrell G.
Water Management Under Drought Conditions: An Overview of Practices by Non-Federal Entities, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Donald Frevert, p354-359

ato Frevert, Donald K., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p601-605 see Mizyed, Numan R., WR July/Aug. 92, p371-387

Foott, Roge

Threatened Levees on Sherman Island, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Richard Sisson and Roy Bell, p756-774

Forbes, Brian A

Design and Proposed Construction Techniques for Pangue Dam, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Dario Croquevielle B. and Hernan Zabaleta G.,

Ford, Catherine R. see Ellis, Glenn W., EE May/June 91, p308-319

Ford, David T.

Prescriptive Model for Missouri River Reservoir-operation Analysis, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p555-560

Ford, Lawrence M. see Gottlieb, Peter, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1349-1358

Ford, Maury E.

Artificial Recharge Feasibility Evaluation by Field Investigation, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings ed. and Nani G. Bhowmit, ed., 1992, with Richard B. Bell, Aladdin Shaikh, George J. Morgan and W. Scott Keys, p642-647

Ford, Peter see Forslund, David W., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518

Forde, M. C. see McCavitt, N., TE July/Aug. 92, p540-556

Fordham, John W.
Rural-Urban Water Transfers in Nevada: Solution or Problem?, Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 992-497

Foreman, M. G. G.

A Finite Element Model for Three-Dimensional Flows Along the West Coast of Vancouver Island, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with R. E. Thomson, D. R. Lynch and R. A. Walters, p574-585

Foresti, S.
see Hassanzadeh, S., (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p762-769

Foriero, A.

Design of Piles in Permafrost Under Combined Lateral
and Axial Load, with B. Ladanyi, CR Sept. 91, p89-105
disc: B. B. Budkowska and C. Szymczak, CR Dec.
92, p162-164
CR Dec. 27, p164-166

vs. p10.2-104 clo: CR Dec. 92, p164-166 Finite Element Simulation of Behavior of Laterally Load-ed Piles in Permafrost, with B. Ladanyi, GT Feb. 90, p266-284

disc: Pierre Morin, GT Jan. 92, p171-173 clo: GT Jan. 92, p173-185

Forman, S.
see Crowe, B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013

Fornstrom, K. James
Variations in Curve Number for a Reclaimed AML Site, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with James L. Smith, p389-394
see Briggs, Brian K., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p257-262

Forristall, George Z.
Specifying the Offshore Environment, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1-41

Forslund, David W.

A Distributed Particle Simulation Code in C++, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Charles Wingate, Peter Ford, J. Stephen Junkins and Stephen C. Pope, p514-518

Forsyth, Richard In Search of Knowledge, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p1-10

Foschi, R. O. see Filiatrault, A., ST Aug. 90, p2127-2142

Fotinos, George C.
Earthquake Damage Repair and Retrofit of the Seventh
St. Terminal Port of Oakland, (Ports '92, David Torseth, ed., 1992), with Gerald M. Serventi and Larry L.
Scheibel, p429-442

Foulke, Stephanie see Salazar, Guillermo F., (Computing in Civil Engineer-ing and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p848-855

Fourney, William L. see Dick, Richard D., AS Jan. 92, p59-69 see Goodings, Deborah J., AS Jan. 92, p44-58

Fournier, Charles P. see Sayao, Otavio J., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p679-693

Fouse, Jeffrey L. see Reese, Lymon C., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1318-1332

Founs, James L.
Engineering of Controlled-Drainage Systems, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with James S. Rogers and Cade E. Carter, p25
ET from Shallow Groundwater Maintained by Controlled-Drainage/Subirrigation System, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with James S. Rogers, p594

Fowkes, Gordon F.
Corrosion Fatigue of Deepwater Offshore Materials,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), with Harris L. Marcus, p694-703

disc. (of Conjunctive Use—Advantages, Constraints, and Examples, by Jack J. Coe, IR May/June 90, p427-443), IR Mar/Apr. 92, p334-336

Fowler, David W.

see Rebeiz, Karim S., (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381

Fowler, J. R.

Projected Compositions and Radiogenic Properties of DWPF Glasses, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), with M. J. Plodinec, p904-910

Fox, Patrick J. C<sub>0</sub>/C<sub>c</sub> Concept Applied to Compression of Peat, with Tuncer B. Edil and Li-Tus Lan, GT Aug. 92, p1256-1263

Fragaszy, Richard J.

Modeling Strength of Sandy Gravel, with James Su,
Farhat H. Siddiqi and Carlton L. Ho, GT June 92,

see Lawton, Evert C., GT May 91, p714-730 see Lawton, Evert C., GT Sept. 92, p1376-1394

Fraher, Michael J.

France, Michael J.

Scour Evaluations of Existing Bridges—U.S. Department of Transportation Federal Highway Administration, Region 6 Forth Worth, Texas, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p64-69

Francingues, Norman R., Jr.
Environmental Engineering Options for Managing Contaminated Sediment, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Daniel E. Avertt, p994-999

see Teeter, Cynthia L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1197-1203

François, D. see Alliche, A., EM Nov. 92, p2176-2190

Frangopol, Dan M.

Structural System Design under Uncertainty Via Pareto Optimization, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Minoru Iizuka, p551-554

Truck Loading Data for a Probabilistic Bridge Live Load Model, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with George G. Goble and Nurhan Tan, p340-343

Frank, James E.

see Nelson, Arthur C., UP June 92, p59-64

Frank, Roger
Evaluation of Performance of Two Piles Using Pressuremeter Method, with Nicholas Kalteziotis, Michel Bustamante, Stavros Christoulas and Haralambos Zervogiannis, GT May 91, p695-713
disc: Ramesh C. Gupta, GT Oct. 92, p1651-1653
clo: GT Oct. 92, p1653-1654

Franklin, A. G.

see Marcuson, W. F., III., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p552-592

Franklis, H. A.
Construction Challenges on Planetary Surfaces, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p458-468
see Feldman, Sandra C., (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p586596

see Hernandez, Laura, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p576-

Franklin, Pamela M.
see Smith, James A., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p186-191

Frankos, Nicholas H.
see Balog, George G., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p256-261

Fransisco, V. D. see Morad, A. A., CP Apr. 92, p114-128

Frantz, Gregory C. see Rashid, Rosmadi Abdul, MT Nov. 92, p353-368 see Triano, James R., MT Nov. 92, p369-384

see Yuan, X., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p616-619

Fraser, John S. see Bishop, Walter A., Jr., CE Oct. 92, p61-63

Frater, George S.
Weldment Design for RHS Truss Connections. I: Applications, with Jeffrey A. Packer, ST Oct. 92, p2784-2803
Weldment Design for RHS Truss Connections. II: Experimentation, with Jeffrey A. Packer, ST Oct. 92, p2804-2820

Frauenhoffer, John Masonry Wall and Window System Leakage Investigation for University Building, CF May 92, p107-115

Frawley, Dorothy D. see Siller, Thomas J., GT Nov. 92, p1787-1803

Frederick, Gerald R. see Tarhini, Kassim M., ST May 92, p1285-1294

see Istunii, Nasian In., See No. 1977.

Fredlund, Delwyn G.

see Khogali, Walan E. I., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p153-167

see Rahardjo, Harianto, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p325-341

Fredsee, Jergen see Sumer, B. Mutlu, WW Jan./Feb. 92, p15-31

Freed, Alan D.

Freed, Alan D.

See Pindera, Marck-Jerzy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1262-1272

Freedman, Paul L.
Using Simple Models to Evaluate Complex Storm Effects,
(Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhownik, ed., 1992), with John K. Marr,

Freeman, Angela see Scott, Stephen H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1018-1023

Frei, Mark W.

Fres, Name W., System Integration for the Disposal of Defense Transurantic Waste, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Joseph A. Coleman and Sandra Fucigna, p409-415

Freilich, M. H.

see Elgar, Steve, WW Jan./Feb. 92, p87-103

Freire-Canosa, J.
see Stevens-Guille, P. D., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p250-255

French, Catherine Wolfgram disc. (of Tenure—Analysis for Professional Engineers in Education, by William Lawson Magette, El Apr. 90, p142-147), El Apr. 92, p213

reach, Richard H.

Design of Flood Protection for Transportation Alignments on Alluvial Fans, IR Mar./Apr. 92, p320-330
Preferred Directions of Flow on Alluvial Fans, HY July 92, p1002-1013

p1,002-1013
 successful Interactions Between Hydraulic Engineering and Geomorphology in Identifying Flood Hazard Areas in the Southwestern United States, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Jeffrey R. Keaton, p581-586

Bnowmik, ed., 1992), with Jettrey R. Keaton, post-3-see Flippin, Syndi J., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p575-580 see Mizell, Steve A., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p128-132

French, Ronald D. see Houck, Carl P., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p433-438

Frevert, Donald

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Frevert, Donald K.

Water Management Under Drought Conditions an Overview of Practices by Federal Agencies, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Darrell G. Fontane, p601-605

Frey, H. Christopher
Evaluation Method for Advanced Acid Rain Compliance
Technology, with Edward S. Rubin, EY Apr. 92, p38-

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Equivalence Between Motions with Noise-Induced Jumps and Chaos with Smale Horseshoes, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Emil Simiu, p660-663

ed., 1992), with Emil Simiu, p660-663

Freyermuth, Clifford L.

Building Better Bridges: Concrete Vs. Steel, with Andy
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Plaza, by Frank J. Heger, CF May 91, p92-112), CF

May 92, p128-129

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Frick, David M.

Effect of Drought on Urban Water Supplies. I: Drought Analysis, with Dennis Bode and Jose D. Salas, HY June 90, p733-753 disc: David E. Creighton, Jr., HY Apr. 92, p643-644

see Abt, Steven R., HY Dec. 92, p1692-1696

Fricker, Jon D.

see Dey, Soumya S., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p42-46

Fridley, Kenneth J.
Creep Behavior Model for Structural Lumber, with R. C.
Tang and Lawrence A. Soltis, ST Aug. 92, p2261-2277
Behavior of Hygrothermal Effects on Load-Duration Behavior of Structural Lumber, with R. C. Tang, Lawrence A. Soltis and Chai H. Yoo, ST Apr. 92, p1023-1038 Hygrothermal Effects on Mechanical Properties of Lumber, with R. C. Tang and Lawrence A. Soltis, ST Feb. 92, p367-581
Load-Duration Effects in Structural Lumber: Strain Energy Approach, with R. C. Tang and Lawrence A. Soltis, ST Sept. 92, p2351-2369
see Rosowsky, David V., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90.
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Erichted Effects

Friedland, Iau see Trent, Roy, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1088-1093

nan, William D.

A Comprehensive Approach to Container Terminal Plan-ning: Striking a Balance, (Ports '92, David Torseth, ed., 1992), p29-42

Friedrichs, Peter see Braaksma, John P., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p124-147

Frieling, Thomass J.

Back to the Future: A Saturn V-Based Low Earth Orbital
Transportation Node, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p957-968

Frits-Hansen, P.
Inspection Planning for Surface Fatigue Cracks, (Probablistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with H. O. Madsen, p312-

Fripp, Jon Surface Sampling of Dry and Underwater Sediment De-posits, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Panayiotis Diplas, p853-858

Fripp, Jon B. see Diplas, Panaviotis, HY July 92, p955-970

Fritzinger, Scott A. Subaqueous Disposal Area Development and Mitigation, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p728-744

Frizell, K. H.

Hydraulics of Stepped Spillways for RCC Dams and Dam Rehabilitations, (Roller Compacted Concrete III, Ken-neth D. Hansen, ed. and Francis G. McLean, ed., 1992), p423-439

Froehlich, D. C.
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russ, Cotta C.
re Sherwood, James A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p155-158

Frost, J. D.

see Leonards, G. A., (disc), GT Nov. 89, p1511-1531

Frost, J. David

Frost, J. David Geographic Information Systems in Earthquake Hazard Analyses, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Jean-Lou A. Chameau and Ronaldo Luna, p452-459

Frostig, Y.
High-Order Theory for Sandwich-Beam Behavior with
Transversely Flexible Core, with M. Baruch, O. Vilnay
and I. Sheinman, EM May 92, p1026-1043

Prachter, Renate
QLRS: An Approach for Qualitative Interpretation of
Lateral Load Resisting Systems, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), with Helmut Krawinkler, p253-260

Fruchtman, Irwin Bridge Rehab is Bad Idea (ltr), CE Feb. 92, p35

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Frydman, Sam
Development of Strain During Monotonic Shear of Soft Clay, with Mark Talesnick, GT May 92, p704-725

Frye, Elisabeth

disc. (of Engineering Women Into the Workplace, by Patti Hinckley, CE Nov. 91, p66-67), CE Feb. 92, p31

First Order Importance Sampling Method and its Variance Reduction, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p568-

Structural Reliability and Proof Testing for Highway Bridges, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Jianguo Tang, p348-3515sic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p176-179

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see Frei, Mark W., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p409-415

disc. (of Curriculum for Future Civil Engineers: Practi-tioner's Viewpoint, by Guy E. Jester, El Oct. 89, p357-362), El Jan. 92, p78

Focates, Ram

disc. (of Drag Coefficient and Fall Velocity of Nonspheri-cal Particles, by Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY May 91, p660-667) with Mary L. Alonso and Julián Aguirre-Pe, HY Nov. 92, p1589-1591

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Branch Switching in Bifurcation of Structures, with Kok
Keong Choong, EM Aug. 92, p1578-1596

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Tuned Liquid Damper (TLD) for Suppressing Horizontal Motion of Structures, with Limin Sun, Benito M. Pacheco and Piyawat Chaiseri, EM Oct. 92, p2017-2030

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Fuknoka, Mass

echanism of a Landslide Caused by Rainfall, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992),

Fulford, Edward T.

Bay Ridge, Anne Arundel County, Maryland Offshore Breakwater and Beach Fill Design, (Coastal Engineer-ing Practice '92, Steven A. Hughes, ed., 1992), with Kenneth M. Usab, p205-220

see Bass, Gregory P., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p583-597

Fulford, Janice M.
Characteristics of U.S. Geological Survey Discharge Measurements for Water Year 1990, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p452-457
WSPRO Files for Slope-Area Computations, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p329-334

Fuller, K.
see Hartig, J. H., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992),
p823-830

Funston, Craig S.
Case Study—Elliott Bay Marina Floating Moorage, (Ports '92, David Torseth, ed., 1992), p263-274

Futa, K.
see Peterman, Z. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1582-1586

Fwa, T. F.

Geometric Characterization of Road Humps for Speed-Control Design, with L. S. Tan, TE July/Aug. 92,

Quantification of Agency and User Values of Pavement Performance, with K. C. Sinha, TE Jan./Feb. 92, p84-98

Fwa, Tien F.
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H. Borden, GT Dec. 90, pla31-1850
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Ross W. Boulanger, ed., 1992), p1457-1463

Gabriel, Lester H. see Gilley, Curtiss W., TE Jan./Feb. 92, p1-19

Gaddy, Marshall

see Sprague, C. Joel, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p288-298

Gadi, Ahmed M.

Future Impact of Trucking Reform on Railway Revenue, with Afifi H. Soliman, TE Sept./Oct. 92, p729-743

Gadoury, Paul
see Deb, Arun K., (Water Resources Planning and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p169-175

Gaekel, L.
RCC Mixes and Properties Using Poor Quality Materials-Concepcion Dam, (Roller Compacted Concrete III,
Kenneth D. Hansen, ed. and Francis G. McLean, ed.,
1992), with E. Schrader, p358-373

Gaffney, Edward S. see Felice, Conrad W., EM May 91, p1119-1135

Set Peace, Solvent See St. John, John P., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p90-95

Gagnon, Cynthia

Three Dimensional Models in CADD, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Brian Baker, p434-442 see Brenner, Brian, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1220-1225

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Gajer, Grzegorz Crack Band Based Model for FEM Analysis of Concrete Structures, with Peter F. Dux, ST June 90, p1696-1714

disc: Zdeněk P. Bažant, ST Mar. 92, p867 clo: ST Mar. 92, p867-868

Galambos, T. V.
see Barker, M. G., ST Apr. 92, p986-998
see Chou, K. C., (Probabilistic Mechanics and Structural
and Geotechnical Reliability, Y. K. Lin, ed., 1992),
p204-207

Galambos, Theodore V.
disc. (of Stochastic FEM-Based Validation of LRFD, by
Sankaran Mahadevan and Achintya Haldar, ST May
91, p.139-1412), ST Sept. 92, p.262-2629
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Galbraith, William L.

Observation, William L.
An Integrated Approach to Highway Design and Environmental Impact Analysis Using GIS and CADD, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Joseph G. Anthony and Anne Sullivan, p161-161.

Galdos, N. H. see Schelling, D. R., ST Nov. 92, p3203-3221

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Gallavresi, Francesco

Grouting Improvement of Foundation Soils, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl-38

Gallaway, B. J.

see Colonell, J. M., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p958-974

Gallegos, David P.
Impact of Fracture Coatings on the Transfer of Water Across Fracture Faces in Unsaturated Media, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Steven G. Thoma and Douglas M. Smith, p738-745

see Kerl, Felicia A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p502-509

Including Uncertainty of Hydraulic Conductivity into Drainage Design, with D. Marcotte and S. O. Prasher, IR Sept./Oct. 92, p744-756

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see Yfantis, E. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2339-2343

Galperin, Boris

Galperin, Boris
The Importance of Density Driven Circulation in Well Mixed Estuaries: The Tampa Bay Experience, (Estuaries: The Tampa Bay Experience, (Estuaries: And Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Alan F. Blumberg and Robert H. Weisberg, p332-343
see Blumberg, Alan F., HY Aug. 92, p1119-1134

Galpia, Floyd L.

An Inside Look at the 40 CFR 191 Containment Requirements, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Raymond L. Clark and Caroline Petti, p1047-1034

Gaister, Richard W.

The Role of Engineering Geology in Slope and Embank-ment Stability Analysis, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p70-94

Galvin, Cyril

disc. (of Longshore-Transport Model for South Indian and Sri Lankan Coasts, by P. Chandramohan, B. U. Nayak and V. S. Raju, WW July/Aug. 90, p408-424), WW Jan./Feb. 92, p120-122

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F. Pierce Linaweaver, ed., 1992), p605-610

see Gerath, Mark, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p599-604

Galya, Donald P.
see Wolf, Steven H., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p226-231

Gan, Julian K.
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Gan, Thian Yew

Modeling Monsoon-Affected Rainfall of Pakistan by Point Processes, with Zahoor Ahmad, WR Nov./Dec. 92, p671-688

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Gang, Jiang Zhi see Chang, Shih Toh, ST Sept. 90, p2410-2418

Ganoulis, Jacques G.
Risk Analysis in Water Resources Engineering: Development and Application, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p1-10

Gant, John E. Deep Water Container Wharf & Crane Foundation, (Ports '92, David Torseth, ed., 1992), p238-247

Gao, Y.
Robust Testing Procedure for Detection of Multiple
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Garcia, Marceto
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Garcia, Marcelo H.

Boundary Conditions for Sediment-Laden Flows, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p404-409

Garcia, Margot W. Evaluation of the Model Water Code from an Environmental Ethic Perspective, (Water Resource-Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p231-236

García-Navarro, P.

1-D Open-Channel Flow Simulation Using TVD-McCormack Scheme, with F. Alcrudo and J. M. Savirón, HY Oct. 92, p1359-1372

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Garea, David C.
Improved Techniques in Regression-Based Streamflow Volume Forecasting, WR Nov./Dec. 92, p654-670

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Garg, Rakesh K.
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Model Sensitivity Analysis in Near-Field Performance Assessment, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with D. M. LeNeveu, p2284-2289

Garland, John G., III.
see Makowski, Paul, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
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see Kilpatrick, B. L., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p803-815

Garner, Sharon B.
see Merrill, Chris A., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p921-928

Garrett, J. H., Jr.
Application of Neural Network to Groundwater Remediation, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), with S. Ranjithan and J. W. Eheart, p.259-267

Neural Networks, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), with J. Ghaboussi and X. Wu, p104-143 see Ghaboussi, J., EM Jan. 91, p132-153 see Linkenheld, J. S., TE Mar./Apr. 92, p241-257

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Garrett, James H., Jr.

Neural Networks and their Applicability within Civil Engineering. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1155-1162

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Object-Oriented Model of Engineering Design Standards, with M. Maher Hakim, CP July 92, p323-347
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Garunkstis, Bruno
Port of Ningbo Master Plan, (Ports '92, David Torseth, ed., 1992), p72-84

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Gasparini, D. A. see Mesarovic, S., EM May 92, p890-903 see Mesarovic, S., EM May 92, p904-920

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Gasparotto, Reaso Waterfall Aeration Works, CE Oct. 92, p52-54

Gasser, M. M.

Gasser, N. N. S. (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p816-821

Gates, Timothy K.

Optimal Irrigation Delivery System Design under Uncertainty, with Abdulmohsen A. Alshaikh, Samir I. Abmed and David J. Molden, IR May/June 92, p433-449

Stochastic Simulation and Optimization of Irrigation
Canal Network Flows, (Irrigation and Drainage: Saving
a Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), with Abdelmohsen A. Alshaikh
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Gatmiri, Behrouz
Response of Cross-Anisotropic Seabed to Ocean Waves,
GT Sept. 92, p1295-1314

Gattis, J. L.

Gattia, J. I. Analyzing Fast-Food Drive-Up Window Site Impacts, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1922), with N. Zaman, G. W. Tauxe and R. S. Marshment, p16-20
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Gaus, Michael P.
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Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p460-467

see Shinozuka, Masanobu, (Lifeline Earthquake Engi-neering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p102-109

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Gauthier, John H.

Estimating the Consequences of Significant Fracture Flow at Yucza Mountain, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Michael L. Wilson and Franz C. Lauffer, p891-898

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Conversion, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), with Jean Marvaldi and Federica Zangrando, p109-151

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Jet Grouting in Contaminated Soils, (Grouting. Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Brian H. Jasperse, p206-214

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Seismic Pile-Group—Structure Interaction, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with K.
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Gazetas, George Free Vibration of Embedded Foundations: Theory Versus Experiment, with Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401

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Engman, ed., 1992), p378-382

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57 Years of Coastal Engineering Practice at a Problem Inlet: Indian River Inlet, Delaware, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Keith D. Watson and Augustus T. Rambo, p503-519

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Pollution Control Under the NPDES Stormwater Program, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with June Barrett-McDaniels, p640-645.

Regional Planning for Stormwater Management, (Envi-ronmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with John P. Hartigan, p492-497

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Gerath, Mark
Municipal Wastewater for Power Plant Cooling Water:
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OFFISIA, BRIMEN PROJECT OF THE PROJE

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Oceans, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p356-369

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Investigation of Parametrically-Induced Excitation in
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Evaluation of Concrete Bridges by Impact-Echo, (Nondestructive Testing of Concrete Elements and Structures,
Farhad Ansari, ed. and Stein Sture, ed., 1992), with Y.
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Calibration of Redundancy Factors for Highway Bridges, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), with Fred Moses,

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Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1151-1158

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Two-Dimensional Circulation Modeling of the Pamlico
River Estuary, North Carolina, (Estuarine and Coastal
Modeling, Malcolm L. Spaulding, ed., Keith Bedford,
ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig
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Gilbert, L. Social and Science Issues in the Local Environment, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), with M. Robinson, pl 813-1818

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92, p804-809 disc. (of Drawdowns for Constant-Discharge One-Dimensional Leaky Aquifer, by Louis H. Motz, IR May/June 90, p456-461), IR Mar/Apr. 92, p32-333 disc. (of Unsteady Drawdown of Water Table, by M. Emin Savci, IR July/Aug. 90, p508-526), IR May/June 92, p504-506

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agement Program Committee, 1992), p1737-1742
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Building a Space Infrastructure: The Reclamation Experience, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p69-77
Extraterrestrial Resources: A Perspective from Terrestrial Economic Geology, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with David L. Kuck, p1048-1057

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wieman, pol-1-800

Pracy-Weisbach Roughness Coefficients for Gravel and
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Wave Barriers: An Environmentally Benign Alternative, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Dennis Nottingham, p479-486

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Ted Engman, ed., 1992), p425-430

# Gist, Wendy S.

In-Channel Sediment Basins: An Alternative to Dam-Style Debris Basins, [Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Scott E. Stonestreet and Ronald R. Copeland, p1000-

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VOC-Contaminated Water Cleanup Incentive Program, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Richard A. Rhone, p214-219

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Wetted-Region Structure in Horizontal Unsaturated Fractures: Water Entry Through the Surrounding Porous Matrix, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992, with D. L. Norton, p71-726

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see Sienel M. D., (High Level Radioactive Waste Management Waste Management Waste Management Waste Management Waste Management Waste Management

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see Tidwell, V. C., (High Level Radioactive Waste Management Program Committee, 1992), p1099-1110

# Slassley, William E.

Glassley, William E.
Water-Rock Interaction in New Zealand Hydrothermal
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The Design and Use of Flow-Through Hold Pads, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p1-6

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Waste Management Program Committee, 1992), with
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Gonçalves, Paulo B.

Axisymmetric Buckling of Pressure-Loaded Spherical

Caps, with James G. A. Croll, ST Apr. 92, p970-985

Goncalves S., Raái New Stability Equation for Columns in Braced Frames, ST July 92, p1853-1870

Gonzalez, Carlos R.
see Barker, Walter R., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p49-63

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Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p968-971

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Goodani, Colimber D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975

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Project Management Oversight—Good Tool for Program
Managers, ME July 92, p243-253

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Modeling Effects of Chemical Explosives for Excavation
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nas, Alvin S.

The Role of Risk Analysis in Feasibility Studies of Water Resources Projects, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiy, ed., 1992), with Lampros E. Bourodimos and Albert Machlin, p322-330

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see Pulley, John, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p739-751

nan, James R.

Goodman, James R. Reliability-Based Specification for Engineered Wood Construction, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Allan G. Burk and David G. Pollock, p73-77

The Theory of Elasticity: 1950-1992 and Beyond: Con-cluding Remarks, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p637-

an, Richard E.

see Yeung, Man-chu Ronald, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p461-478

See El-Gazairly, Loai, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p896-904

Goodno, Barry J.

Computing in Civil Engineering and Geographic Information Systems Symposium, with Jeff R. Wright, ed., 1992, 0-87262-869-8, 1260pp.

disc. (of Kinematic Wave Controversy, by Victor M. Ponce, HY Apr. 91, p511-525), HY Sept. 92, p1334-1335

Goodrich, R.

see Bauer, S. J., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277

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Goodspeed, Charles H.

see Schmeckpeper, Edwin R., (Materials: Performance and Prevention of Deficiencies and Failures, Thom-as D. White, ed., 1992), p632-644

Goodwin, Arthur B.

Alameda Transportation Corridor, (Ports '92, David Tor-seth, ed., 1992), p94-107

Goodwin, Chris E. see Swift, M. Robinson, WW Nov./Dec. 92, p587-598

Extended-Life Nuclear Waste Package Utilizing Redun-dant Corrosion/Containment Barriers, (High Level Ra-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. E. Westerman, p1681-1686

Goodwin, Richard W.

Resolving Environmental Concerns: Ash Beneficial Re-use, (Utilization of Waste Materials in Civil Engineer-ing Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p22-31

odwin, Zane M.

disc. (of Breakwater Breakthrough—Bold New Breakwaters, by William F. Baird, Kevin Hall and Virginia Fairweather, CE Jan. 87, p45-48), CE May 87, p38

Gopalratnam, Venbakm C.
Effect of Collector Dosage on Metal Removal by Precipitation/Flotation, with Gary F. Bennett and Robert W.
Peters, EE Nov./Dec. 92, p923-948

Goranflo, H. Morgan, Jr.
Operation of the Tennessee Valley Authority Water Control System Under Extreme Drought Conditions, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p360-346.

Gorbach, Christopher A. Channel Restoration Above Elephant Butte Reservoir, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1952), p114-119

Gordan, Elias M.
disc. (of L'Ambiance Plaza: What Have We Learned, by Virginia Fairweather, CE Feb. 92, p38-41), CE July 92, p38,40

Behavior of Concrete-Graphite/Epoxy Sections in Composite Bridge Girders, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with M. Saiidi and N. Wehbe, p696-709

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Hydroulous

Gordon, Mark E.

Hydraulic Conductivity of Three Landfill Clay Liners, with Paul M. Huebner and Thomas J. Miazga, GT Aug. 89, p1148-1160

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Gorl, Roberto see Bernardini, Alberto, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28

Goring, Derek G. Propagation of Long Waves Onto Shelf, with Fredric Raichlen, WW Jan./Feb. 92, p43-61

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a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p186-191

Gossen, Paul disc. (of Floating Fabric Over Georgia Dome, by Matthys Levy, CE Nov. 91, p34-37), CE Apr. 92, p28,30

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Throughput Study for the Civilian Radioactive Waste Management System, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with William Bailey, III., Flora Emami, Lawrence M. Ford and John F. Vine p.1340, 1358 King, p1349-1358

Small Utility GIS, with Robert Newton, CE Nov. 92, p69-71

Goughnour, R. Robert
Flow Capacity Effect on Vertical Drain Performance,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and lian Juran, ed.,
1992), p993-1005

Goul, K. Michael

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Gould, J. C.
Influence of Irrigation on Subsurface Drainage, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with J. C. Guitjens, p183-188

Excavation and Support Systems in Urban Settings, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), with G. J. Tamaro and J. P. Powers, pl 44-171

Gould, Marston

Evolution of the Space Station Freedom Module Pattern, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with James Hendershot and Rudy Saucillo, p975-986

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Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p249259

Gould, Phillip L.

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stems Analysis in Water-Distribution Network Design: From Theory to Practice, WR May/June 92, p238-248

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see Delmas, Ph., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1201-1212

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see Bacconnet, Claude, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p163-166

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From Design to Remediation: The Vroom Site, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Mark S. Mihm, p309-314

emann, Iris

see Müller, Agmar, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p405-417

Grablutz, Frank M.

see Deb, Arun K., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p169-175

Grace, Robert A.
Reliable Design-Wave Force Predictions for Seabed Pipelines, (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p481-495

Gradilone, Frank, III.

Development of a Water Conservation Program for the Spring Valley Water Company, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p754-759

Compaction Grout, 1992, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p275-287

Earthquake Support Grouting in Sands, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p879-888

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Graham, N. J. D. see Ojha, C. S. P., EE Nov./Dec. 92, p964-980

Graham, Rogers

see Lewandowski, Laurand H., (Materials: Performance and Prevention of Deficiencies and Failures, Thom-as D. White, ed., 1992), p53-65

see Lewandowski, Laurand H., (Materials: Performance and Prevention of Deficiencies and Failures, Thom-as D. White, ed., 1992), p449-461

Forensic Analysis Techniques for Joint Sealants, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Larry N. Lynch, p404-414

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see Curran, Donald R., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p369-372

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Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and lian Juran, ed., 1992), p474-485
see De Paoli, B., (Grouting, Soil Improvement and
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Holtz, ed. and Ilan Juran, ed., 1992), p486-499

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see Lieber, B. B., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p848-851

Dry Fuel Store for Advanced Gas Cooled Reactor Fuels, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. M. Bocock and C. J. Ealing,

Grant, Lavonia

Grant, Lavonia Structural Design of the GN&C Navigation Base for the Space Station Freedom, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeb, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Fred Cutting, p839-849

Graser, Daniel J.

Oraser, Daniel Committee Horizons: DOE's Records Information Systems Design Efforts, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), Waste Man p2098-2105

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Modular Robot Testbed, (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), with Wayne
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see Dong, Allen, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p164-170

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Gray, Donald H.

Gray, Donas II.
Biotechnical Stabilization of Cut & Fill Slopes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Robbin B. Sotir, pl 395-1410

Biotechnical Stabilization of Highway Cut Slope, with Robbin B. Sotir. GT Sept. 92, p1395-1409

Dissolution Rates of As-Received and Partially Oxidized Spent Fuel, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with L. E. Thomas, p1458-1464

Grayman, Walter TDHNET, CC Feb. 92, p1,4-5

Grayman, Walter M.

Spatial Decision Support System for Toxic Spill Modeling in the Ohio River, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), with Jason P. Heath and Richard M. Males, p?4-8 see Males, Richard M., (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p105-123

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Green, Robert K.

Selection of Ground Motions for the Seismic Evaluation of Embankments, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p593-607

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Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and llan Juran, ed., 1992), p350-359

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see Ward, David S., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p32

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e Fischer, Joseph A., (Grouting, Soil Improvement and
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Development Status of the GA-4 and GA-9 Casks, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1832-1838

Gresh, H. Wayne

Water Reuse to Gain Water Rights for Hays, Kansas, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Jeffrey W. Henson, p55-60

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Ridding Strategy: Winning over Key Competitors, CO

Griffith, Don A.

Results from a Long-Term Winter Cloud Seeding Program in Utah, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with John R. Thompson and Dan A. Risch, p559-564

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Failure Criteria Interpretation Based on Mohr-Coulomb Friction, GT June 90, p386-999 disc: R. M. Haithornthwaite, GT Jan. 92, p188 disc: Alan K. Parkin, GT Jan. 92, p189-190 err: GT May 92, p837

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disc. (of Civil Engineering Education: Case Study Approach, by Jeffrey S. Russell and Bob G. McCullouch, EI Apr. 90, p164-174), EI Apr. 92, p209-210
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disc. (of Water Manasement: Challenge and Opportunity.

disc. (of Water Management: Challenge and Opportunity, by Warren Viessman, Jr., WR Mar./Apr. 90, p155-169), WR Jan./Feb. 92, p102-104

Grigoriu, Mircea

Application of the Sampling Theorem to the Representation of Random Fields, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p33-36

1992), p33-36 Experimental Validation of a Probabilistic Fracture Mechanics Model, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with A. R. Ingraffea, p443-446 Reliability of Degrading Dynamic Systems with Applications, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Igor Po-bility and Card. Rychlik, p300-303

see Rychlik, Igot, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), and Geote p304-307

Grigsby, Doris K.
Space Exposed Experiment Developed for Students, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Bob Melton, p2161-2171

Orus, S. I. Nonlinear Shoaling and Impact of Waves on Coastal Structures, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with M. A. Losada, F. Martin and I. A. Svendsen, p79-82

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White, ed., 1992), pl 30-145

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Management, High Level Radioactive Waste Management Program Committee, 1992), p2306-2312

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Performance of Free Draining Base Course at Fort Campbell, Kentucky, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p434-448

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Gromov, Valery V.

Mechanical Properties of Lunar Soil and Simulants, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.

Miller, ed., 1992), with W. David Carrier, III., p518-527

Grondin, L.
Ontario Hydro Used Fuel Transportation Assessment,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), with D. Ribbans and S. Naqvi, p1209-

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Nonlinear Modeling of Truss-Plate Joints, with Anton Polensek, ST Sept. 92, p2514-2531

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Detection of Cracks in Reinforced Concrete Cans, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p413-416

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Planning and Designing of a Grit Removal Facility, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with J. David Ross, Manu A. Patel and Burton D. Sklar, p275-280

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Sture, ed. and Russell J. Miller, ed., 1992), p21882195

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Flexible Plates for Control of Stress Distribution, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p592-595

Georgically Loaded Plates on Reinforced Subgrades, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with John J. Nocera, pl 116-1128

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Threatened Resource—In Search of Solutions, Ted
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Threatened Resource—In Search of Solutions, Ted
Eugman, ed., 1992), p183-188

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Temporary Tunnel Excavation Support by Chemical Grouting, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Gary E. Taylor and Roy H. Borden, p423-435

Guldberg, Peter H.
Developing Protocols for Motor Vehicle Air Quality
Modeling, (Transportation Planning and Air Quality
Roger L. Wayson, ed., 1992), p306-314

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Centringe Models of Clay-Lime Reinforced Soil Walls, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), with Deborah J. Goodings, p1249-1260

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Flood Control Experiences in China and 1991 Flood Disaster, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p965-970

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Gunnerson, Charles G.
Water Management as an Instrument for Cooperation and Reconciliation, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p724-729

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Cunnuts, Brett
Review and Evaluation of the Use of Microsilica as an
Admixture in Concrete, (Utilization of Waste Materials
in Civil Engineering Construction, Hilary I. Inyang, ed.
and Kenneth L. Bergeson, ed., 1992), with Fahad Alnowaiser, p92-103

Gunnison, Donglas

see Teeter, Cynthia L., (Hydraulic Engineering: Saving a

Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

1992), p1197-1203

Günther, H.
see Valentine, M. K., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1875-1882

see Kurt, Carl E., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p17-24

Guo, L.-L.

Three-Dimensional Thermal Jump in Stratified Cooling Channel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with R. E. Bad-dour, p381-384

Guo, Yuanyu see Dai, Dingzhong, WR May/June 92, p337-349

Gupta, Dinesh C.

NRC's Geotechnical Engineering Research Needs for the High-Level Waste Repository Program, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Jacob Philip, Loren J. Lorig and Asadul H. Chowdhury, p212-219

disc. (of Optimal Upgrading of Hydraulic-Network Reliability, by Lindell Ormsbee and Avner Kessler, WR Nov/Dec. 90, p784-802) with Pramod R. Bhave, WR July/Aug. 92, p486-467

Gupta, Ram

Stochastic Analysis of Seasonal Hydraulic Conductivity, (Irrigation and Drainage: Saving a Threatened Resource—in Search of Solutions, Ted Engman, ed., 1992), with Ramesh Rudra, Trevor Dickinson, Naveen Patni and Greg Wall, p32-38

see Aidanpää, Jan-Olov, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1031-1034

Gupta, Ramesh C. disc. (of Evaluation of Performance of Two Piles Using Pressuremeter Method, by Roger Frank, Nicholas Kal-teziotis, Michel Bustamante, Stavros Christoulas and Haralambos Zervogiannis, GT May 91, p695-713), GT Oct. 92, p1651-1653

Gupta, Sanjee

see Plaskacz, Edward J., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p107-110

Gupta, Suresh K

see Pandey, Ravi S., IR May/June 92, p382-396

Guralnick, Sidney A.

Incremental Collapse of Structures with Constant Plus Cyclically Varying Loads, with Thomas Erber, Osama Soudan and Jixing He, ST June 91, p1815-1833 disc: Andrzej Siemaszko, ST Sept. 92, p2630-2631 clo: ST Sept. 92, p2631

Gureghian, A. B.

Deterministic and Probabilistic Performance Assessment Methods Applied to Radionuclide Migration Through Fractured Geologic Medium, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Y.-T. Wu and B. Sagar, p985-993

Gusheh, P.

see Parsanejad, S., ST Nov. 92, p3055-3066

Gutierrez, David J.

see Moore, Nathan R., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2282-2292

er, Michael P.

see Zlotsky, Amy, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p474-479

Guvenis, Moris

see Sanvido, Victor, CO Mar. 92, p94-111

Guy, Louis L., Jr.

Upgrading the First Professional Degree, El Oct. 92, p345-348

Guymer, I.

Longitudinal Dispersion Coefficients in Estuary, with J. R. West, HY May 92, p718-734

Guza, R. T.

see Elgar, Steve, WW Jan./Feb. 92, p87-103

Guzina, Bojan B.

see Pak, Ronald Y. S., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p596-599

Gwynne, Owen

Construction and Development of a Human Base on Mars, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Yoji Ishikawa, Yukinobu Yamamoto, Hisateru Uyeda and Thomas Bondari ed. giovi, p89-99

see Ralston, Michael, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-297.

Ha, Bellada
Pulmonary Artery Velocity Profiles in Young Lambs,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), with Hiroshi Katayama,
Robert Krzeski, Carol L. Lucas, G. William Henry, Patricia Lynch, Ajit P. Yoganathan, Jose I. Ferreiro and
Benson R. Wilcox, p836-839

Ha, K. see Hussein, R., AS Oct. 92, p480-490

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Haase, Paul W.

Homopolar Pulse Butt Welding of API 5L Line Pipe,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), with Zwy Elizezer, Robert Carnes,
John Gully and Mike Harville, p813-827

Hackett, Robert M.
Modeling Stiffness Degradation in Filamentary Composite Materials, with Kerry T. Slattery, MT May 92,

Hacki, K. Bifurcations and Chaos in Structural Control, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. Cheng, C. Y. Yang and M. Chajes, p664-667 see Cheng, A. H.-D., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p420-423

Haddock, J. E., Sr. see White, T. D., TE Nov./Dec. 92, p787-804

Hadipriono, Fabian C.

Expert System for Construction Safety. I: Fault-Tree Models, CF Nov. 92, p246-260

Expert System for Construction Safety. II: Knowledge Base, CF Nov. 92, p261-274

Hadjian, Asadour H.

Dynamic Soil-Pile-Structure Interaction—The State-ofPractice, (Piles Under Dynamic Loads, Shamsher
Prakash, ed., 1992), with Richard B. Fallgren and Mark
R. Tufenkjian, p1-26

Hadley, William O.
The SHRP-LTPP Asphalt Resilient Modulus Pilot Study, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Jonathan L. Groeger, p130-145

Haerer, H. A. (Wait) see Roberds, William J., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1743-1750

Haff, Peter K.

Platt, reter a.

Discrete Mechanics of Sediment Transport, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p756-759

Hageman, John P.
Preliminary Analysis of Repository Operational Criteria, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Asadul H. Chowdhury and Jerome R. Pearring, p1067-1073

Hagemeister, M. see Woldt, W., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416

Hagen, Øistein Conditional and Joint Failure Surface Crossing of Sto-chastic Processes, EM Sept. 92, p1814-1839

chastic Processes, EM Sept. 92, p1814-1839

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Uniform Aerated Chute Flow, HY Apr. 91, p528-533
disc: Hubert Chanson, HY June 92, p944-945
clo: HY June 92, p946
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disc. (of Drop Manholes in Supercritical Pipelines, by George C. Christodoulou, IR Jan./Feb. 91, p37-47), IR Sept./Oct. 92, p832

disc. (of Force on Slab Beneath Hydraulic Jump, by Javad Farhoudi and Rangaswami Narayanan, HY Jan. 91, p64-82), HY Apr. 92, p666-667 see Bretscher, Ulrich, EE May/June 92, p307-321 see Rutschmann, Peter, HY June 90, p765-782 see Schwalt, Markus, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p231-236

Hagerman, George Economics of Wave Power, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p213-257

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Hagerty, D. J.
Seepage Influence on Stability of Bridge Abutments, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with A. C. Parola, p900-905
see Parola, A. C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p660-665
see Parola, A. C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p919-924
Hala, Daeld M.

Hahn, Daniel M.

Haha, Daalel M. The Reconstruction of the Morton Street Evacuation and Ventilation Shaft, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p91-106 see Kerr, William C., CO Mar. 92, p166-178

Hahn, G. D.
Buckle Propagation in Submarine Pipelines, with M. She
and J. F. Carney, III., EM Nov. 92, p2191-2206

Hahn, Guillermo D.
Two Basic Concepts in Offshore Engineering, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p188-191

Hahn, R. E.
see Doman, J. W., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1889-1895

Halder, S. see Delmas, Ph., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1201-1212

Haimes, Yacov Y.
Risk-Based Decision Making in Water Resources V,
ISSN: 1063-5076, with David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992, 0-87262-899-X, 395pp.
see Lambert, James H., (Risk-Based Decision Making in
Water Resources V, Yacov Y. Haimes, ed., David
A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992),
pp311-321

see Li, Duan, (Risk-Based Decision Making in Water Re-sources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283

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Hairr, John

Structural Considerations in the Design of a Mars Mission Aerobrake, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Eric Klang, p873-884.

Haisler, Vern K.
see Corapcioglu, M. Yavuz, (Water Resources Planning
and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p254-259

Haith, D. A.

Sludge Loading Rates for Forest Land, with J. E. Reynolds, P. T. Landre and T. L. Richard, EE Mar./Apr. 92, p196-208

Haithoruthwaite, R. M. disc. (of Failure Criteria Interpretation Based on Mohr-Coulomb Friction, by D. V. Griffiths, GT June 90, p986-999), GT Jan. 92, p188

Hajare, Ankur R.
A Facility for Training Space Station Astronauts, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with James R. Schmidt, p1645-1655

Hajela, Prabhat

see Szewczyk, Zbigniew P., (Computing in Civil Engineer-ing and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1163-1170

Haji-Ahmad, Kamarudin see Hryciw, Roman D., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1464-1480

and Ross W. Boulanger, ed., 1992), p1404-1400

Håkansson, Uf
Rheological Properties of Microfine Cement Grouts with
Additives, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and
Ilan Juran, ed., 1992), with Lars Hässler and Håkan
Stille, p551-563
see Hässler, Lars, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p449-460
see Hässler, Lars, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p461-473

Hakim, M. Maher

A Design Component Library Based on Design Stan-dards, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with James H. Garrett, Jr., p105-112 see Garrett, James H., Jr., CP July 92, p323-347

Haldar, Achintya
Reliability of Geometrically Nonlinear PR Frames, with
Yiguang Zhou, EM Oct. 92, p2148-2155
Reliability of Nonlinear Frame Structures by SFEM,
(Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Yiguang
Zhou, p336-339

see Mahadevan, Sankaran, ST May 91, p1393-1412

Hale, F. V.

see Tsang, C. F., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p304-309

Hale, James R.

see Morris, Derek V., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p560-570

Hales, Lyndell Z.

Military Techniques for Expedient Repair of Earthquake Damaged Harbor Infrastructure, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Ivan L. Sheali, 9370-386

Haiff, Albert H.

Calculation of Runoff from Rainfall Using "NURP" Data, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Henry M. Halff and Juan S. Rodriguez, p487-492

Halff, Henry M.
see Halff, Albert H., (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p487-492

Hall, Brun R. Numerical Modeling of Reservoir Tailrace Hydraulics for Water Quality and Habitat Analysis, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with John Nestler, p952

Hall, Craig A.
see Herlache, W. Andrew, (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p737-755

see Baird, William F., CE Jan. 87, p45-48

Hall, Kevin R.

Trends in Phreatic Surface Motion in Rubble-Mound Breakwaters, WW Mar./Apr. 91, p179-187 disc: Per Bruun, WW May/June 92, p326-327 clo: WW May/June 92, p328-331

Hall, Richard E. disc. (of Technical Personnel Shortages in Construction Industry, by Russel C. Jones, El Jan. 90, p16-26), El Jan. 92, p91

Hall, Robert A. Transfer of Terrestrial Technology for Lunar Mining, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Patricia A. Green, p1150-1161

Millet, ed., 1992.), with Patricia A. Green, p1130-1101

see Bruintjes, Roelof T., (Irrigation and Drainage: Saving
a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p612-617

see Clark, T. L., (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p606-611

Hallahan, Fred C., Jr.
The Future Role of Factory Built Housing, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p.29-38

Hallin, Jack The Last Freeway, CE May 92, p60-63

Hallman, Cynthia see Hill, Sine, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p33-40

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see AbouRizk, Simaan M., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), p1147-1154
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Partitioning of Elements by Refuse Processing, with Vic-tor A. Hammer and Gary Boley, EE Sept./Oct. 92, p725-743

Hamel, James V.
Stability Evaluations for Old Water Supply Dams in Pennsylvania, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1050-1065

Hamerski, Francine M. see Russell, Thomas S., Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941

Hamid, Ahmad A. Flexural Tensile Strength of Partially Grouted Concrete Masonry, with Omar A. Elnawawy and Sammu R. Chandrakeerthy, ST Dec. 92, p3377-3393

Hamilton, Dennis O. Records Management in Engineering Firms, ME Oct. 91, p346-356 disc: John M. Bolton, ME Oct. 92, p400-402

Hamilton, Douglas

Hydrologic Assessment for Riparian Restoration Projects, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p624-629

Hamilton, Douglas L. see MacArthur, Robert C., (Hydraulic Engineering: Sav-ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1064

Hamilton, J.

Modeling and Pilot-Scale Experimental Verification for
Predenitrification Process, with R. Jain, P. Antoniou,
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Jan/Feb. 92, p38-55

Hamilton, Peter Modeling Nearshore Currents in the Vicinity of the Endicott Causeway, Alaska, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p227-239

son, ed., 1972, p.21-239

Hamilton, Robert B.

Funding of Wastewater Reuse Systems Under the Federal
Small Reclamation Projects Act, (Water Resources
Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992, p702-706

Hammad, A. M.
see Issa, M. A., Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p127-130
see Issa, M. A., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p467-470

Hammamii, Y. see Lavallée, J. G., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1006-1021

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Hampton, Delon Critical Issues for Engineering Managers, ME July 92, p235-242

Hamrick, J. M.

Hamrick, J. M.
Estuarine Environmental Impact Assessment Using a Three-Dimensional Circulation and Transport Model, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p292-303 see Rennie, S. E., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p48-55

Hamza, Ali M.

Modeling Bond Stress-Slip of Reinforcing Bars Embedded in SIFCON, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Antoine E. Naaman, p996-999

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Hancu, Simion
Wave-Motion Stability in Canals with Automatic Controllers, with Paul Dan, HY Dec. 92, p1621-1638

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Handy, Richard L.
disc. (of The Debate Over Large Dams, by Philip B.
Williams and Jan Veltrop, CE Aug. 91, p42-48), CE
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Hang, Ma Zhong
The Design and Construction of Shuikou Project RCC
Diversion Wall, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Cai Heming and E. B. Kollgaard, p117-131

Haninger, Edward R.

Conceptual Design of Modules for a Lunar Base, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Philip J. Richter, p100-111

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Hanley, Richard C.
The Connecticut Photolog Laser Videodisc-Based Pavement Rating System, with Donald A. Larsen, TE Mar./ Apr. 92, p258-269

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Enhancing the Partnership—Improving Public Awareness Through Education and Information, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1794-1796.

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The Virtual Mission: A Step-Wise Approach to Large
Space Missions, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), with Morgan Jones,
Adrian Hooke and Richard Pomphrey, p1523-1529

Adrian Hooke and Richard Pomphrey, p1523-1529

Hansen, Kenneth D.

RCC for Rehabilitation of Dams in the USA-An Overview, (Roller Compacted Concrete III, Kenneth D.

Hansen, ed. and Francis G. McLean, ed., 1992), p22-46

Roller Compacted Concrete III, with Francis G. McLean, ed., 1992, 0-87262-862-0, 520pp.

see Arnold, Terrence E., (Roller Compacted Concrete III,
Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p341-357

see Van Riessen, Gary J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O.

Holtz, ed. and Ilan Juran, ed., 1992), p981-992

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Hansen, N. R. Strain-Based Damage Deactivation in Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with H. L. Schreyer, p486-489

Hansen, Ralph M. Limited View Limits Engineers (ltr), CE Feb. 92, p32.35

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Happel, John Amin
Prototype Lunar Base Construction Using Indigenous Materials, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Kaspar Willam and Benson Shing, p112-122),

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Harder, Leslie F., Jr.
Investigation of Mackay Dam Following the 1983 Borah
Peak Earthquake, (Stability and Performance of Slopes
and Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p956-972

Hardison, Richard L. disc. (of A New Era In Transportation, by John Prender-gast, CE Apr. 92, p38-41), CE Oct. 92, p33-34

Hardman, Scott L. see Spang, Wesley, (disc), GT Oct. 90, p1536-1548

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see English, Deborah, CE Mar. 92, p49-51
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In-Plane Non-Linear Random Vibration of Composite
Plates, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Ahmad Hawwari, p188-191
Random Vibration under Propagating Excitation:
Closed-Form Solutions, EM Mar. 92, p575-586
Response of Suspension and Deck Arch Bridges to Spatially Varying Ground Motion, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K.
Lin, ed., 1992), with Ahmad Hawwari and Basheer N.
Sweidan, p264-267

Harik, Issam E. see Jianping, Pei, ST Nov. 92, p3186-3202 Harle, Effie

Harle, Ellie
see Gil, April VanCamp, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1819-1825

Harlow, Engages H.

Engineer Program Committee, 1992), p1819-1825

Harlow, Engages H.

Engineer Pioneered Daring Docks During WWII (ltr), CE
June 92, p38

Is Stop and Go Better Than Easing the Flow? (ltr), CE
July 92, p36,38

disc. (of Can Civil Engineers Make the Difference by Involvement in the Political Process?, by Karen S. Irion,
El Oct. 89, p441-445), El Jan. 92, p83-85

disc. (of Plain Engineering: Philosophical and Ethical
View, by Steven S. Crider, El Apr. 90, p148-155), El
Jan. 92, p97-98

Harmon, Thomas C. Simulating Solute Transport Using Laboratory-Based Sorption Parameters, with Lewis Semprini and Paul V. Roberts, EE Sept./Oct. 92, p666-689

Harms, Willard D., Jr.
Softening by Fluidized Bed Crystallizers, with R. Bruce
Robinson, EE July/Aug. 92, p513-529

Harmsen, E. W. see Munster, C. L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424

Harn, Robert E. Proposed Seismic Design Method for Piers and Wharves, (Ports '92, David Torseth, ed., 1992), with Bankim C. Mallick, p403-417

Harned, James A.

Savannah International Airport Environmentally Minded Stormwater Master Planning, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Elliot Silverston and Mark Easley, p356-361

Haroun, Medhat A.

Parametric Study of Seismic Soil-Tank Interaction. 1: Horizontal Excitation, with Wajdi Abou-Izzeddine, ST Mar. 92, p783-797

Parametric Study of Seismic Soil-Tank Interaction. II: Vertical Excitation, with Wajdi Abou-Izzeddine, ST Mar. 92, p798-812

Harper, Thomas G. Seismic Assessment of Tailings Dams, with Harvey N. McLeod and Michael P. Davies, CE Dec. 92, p64-66

McLeod and Michael F. Davies, C.E. Dec. 92, pos-oo Harr, Milton E. Accounting for Uncertainties in Pavement Response, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p1-11 Accounting for Uncertainty in Natural Systems, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p1612-1616

1992), p1612-1616
Analysis of Uncertainty in Geotechnical Site Investigations, and Why. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p753-758
A More Rational Approach to Pavements. (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p172-185

Harrald, John R. Risky Business: Can We Believe Port Risk Assessments?, (Ports '92, David Torneth, ed., 1992), with Thomas A. Mazzuchi and Christopher M. Stone, p657-669

Harrington, Laurel see Anton, Walter F., CE Aug. 92, p38-40

Harris, Andrew S.
Aircraft Noise Monitoring at Denver International Airport, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p41-48

Harris, Douglas H.
Human Error in Complex Systems, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1527-1533

Harris, Harold W. Taming Tornado Alley, with Kishor C. Mehta and James R. McDonald, CE June 92, p77-78

Harris, Jeffrey R.

See Kennedy, Kriss J., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p398-

Harris, Mitchell L.

In Situ Investigation and Rehabilitation of Unlined Cast Iron Water Mains, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with David M. Dumas, p334-339

Harris, Robert B. A Challenge for Research, CO Sept. 92, p422-434

Harrison, I. G.

The Potential Application of Military Fleet Scheduling Tools to the Federal Waste Management System Transportation System, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. B. Pope, R. D. Kraemer and M. R. Hilliard, p1324-1329

Harrison, Larry L.
Rock Creek—Cresta Sediment Management Plan, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p102-107

Harrison, Lawrence J.
Magnitude of the Scour Evaluation Program, (Hydraulic
Engineering: Saving a Threatened Resource—In Search
of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), p1067-1071

Harrison, Richard A. Cylindrical Fabric-Confined Soil Structures, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p123-134

Harrison, Stuart

see Dempsey, Brian A., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p486-491

Hart, Edward
see MacBroom, James G., (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p1154-1158

Hart, W. E. Flow in Trapezoidal Channels, with B. P. Thoreson and S. A. Musil, IR Nov./Dec. 92, p971-976

Harter, Russell G. see Pradel, Daniel, (disc), GT Oct. 90, p1536-1548

Hartig, J. H.
Identifying the Critical Path and Building Coalitions for
Restoring Degraded Areas of the Great Lakes, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamoux, ed., 1992), with D. P. Dodge, L. LovetiDoust and K. Fuller, p823-830

Hartigua, John P. see George, Thomas S., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p492-497

Hartley, D. M.

Interpretation of Kostiakov Infiltration Parameters for Borders, IR Jan./Feb. 92, p156-165

Hartman, J. Paul disc. (of Ph.D. Roadblocks for Experienced Engineers, by Bruce E. Marsh, El Jan. 90, p56-60), El Apr. 92, p198-200

Hartmann, L. see Pan, Boshou, EE Sept./Oct. 92, p744-754

see I al., Bosiou, E. Sepi. Foc. 92, p. 144-154

See MacArthur, Robert C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1061-1066

Harville, Mike see Haase, Paul W., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p813-827

Hasebe, Norio see Okumura, Mikiya, EM June 92, p1113-1128

Hasegawa, Kazno see Takena, Koei, ST Feb. 92, p377-391

Haselton, Mark B. see Rahimzadeh, Housh, CE Feb. 92, p42-44

Hasenoehrl, Patrick J. see Treat, James M., (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p91-95

Hasfurther, Victor R.

Hydrogeotechnical Considerations for the Disposal of Oil Shale Solid Waste Material, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with John P. Turner, p395-400

Hasham, S. A. see Qasim, S. R., EE May/June 92, p432-437

Hashida, T. see Li, Victor C., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1000-1003

Hashmi, Asma M. see Benekohal, Rahim F., TE Jan./Feb. 92, p111-129

Haskew, Harold M.

In-Use Emissions with Today's Closed-Loop Systems,
(Transportation Planning and Air Quality, Roger L.
Wayson, ed., 1992), with Thomas F. Liberty, p219-254

Haskin, Larry A.

Steady State Composition with Low Fe<sup>2+</sup> Concentrations for Efficient O<sub>2</sub> Production by "Magma" Electrolysis of Lunar Soils, *Engineering, Construction, and Operations in Space III*, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Russell O. Colson, p651-665

Hasofer, A. M.

Hasofer, A. M. High Order Statistics in Structural Reliability, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992, p.244-247
Slepian Process of a Non-stationary Process, (Probabilitic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p.296-299

Hason, Stanley see Moselhi, Osama, CO Dec. 92, p731-748

Hassaballah, Amr S. see Naik, Tarun R., (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p92-106

Hassan, A. See Soliman, M., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p269-274

Hassan, M. H. M.

A Two-Stage Safety Assessment Methodology for Construction Activities, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with B. M. Ayyub, p515-518

1992), Watt B. H. C. S. J. C. S. C. S. C. S. C. S. C. S. S. Minimal Storage Finite Element Solution of Large-Scale Three-Dimensional Elastodynamic Problems, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with S. Foresti, H. Murakami and V. Sonnad, p762-769

Hässler, Lars
Classification of Jointed Rock with Emphasis on Grouting, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Ulf Håkansson and Håkan Stille, p449-460

Stille, p449-400
Computer Simulated Flow of Grouts in Jointed Rock,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and llan Juran, ed.,
1992), with Ulf Håkansson and Håkan Stille, p461-473
see Håkansson, Ulf, Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and llan Juran, ed., 1992), p551-563

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Hata, Kouichi see Takena, Koei, ST Feb. 92, p377-391

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Hatanaka, Shigemitsu see Mizuno, Eiji, EM Aug. 92, p1546-1563

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Hatfield, Kirk

Hammeld, Rurk
Theory and Experiments on Subsurface Contaminant Sorption Systems, with David Burris, Thomas B. Stauffer and Joe Ziegler, EE May/June 92, p322-337
see Motz, Louis H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-286

Hattler, Brack G.

see Hung, Tin-Kan, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p709-712

Haunschild, Kurt B. see McCormick, Edward H., CE Jan. 92, p60-62

Haupt, Richard S.

Instrumentation for Characterizing Seasonal Change in Properties of Pavement Structures, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Dale C. Bull, p125-137

Haury, Richard L.

Management of Design, (International Air Transporta-tion: A New International Airport, Robert E. Boyer, ed., 1992), p170-183

Hauser, Gary
see Shiao, Ming, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p1136-1141

Hauser, Gary E. Innovative Reregulation Weirs, with James A. Niznik, W. Gary Brock and Richard M. Shane, CE May 92, p64-66

Hausmann, Manfred R.

Slope Remediation, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1274-1317

Havaer, Kerry S.
see Al-Gadhib, Ali H., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
p236-239

see Al-Gadhib, Ali H., EM Oct. 92, p2104-2126

Hawk, John K. Evaluating Spillway Adequacy, CE May 92, p74-76

Hawkins, H. see Heiken, G., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564

Hawwari, Ahmad

ERWEST, Abmad S., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p188-191 see Harichandran, Ronald S., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p268-267

Hayashi, Hideo

see Mori, Akira, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p313-324

Hayden, Robert F.

see Egan, John A., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p867-878

see López, Roberto A., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1433-1445

Hayden, William M., Jr.

Management's Fatal Flaw: TQM Obstacle, ME Apr. 92, p122-129

disc. (of Project Management: Keys to Success, by David Bentley and Gary Rafferty, CE Apr. 92, p58-59), CE Sept. 92, p35

Hayes, Donald F.

Engineering Aspects of Wetland Design, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Michael R. Palermo, p344-349

Hayes, John M.

disc. (of Is Advanced Technology "The Gateway to Irre-sponsibility?", by Jon E. Zufelt, El Oct. 89, p434-437), El Jan. 92, p81-82

Hayes-Roth, B.

see Tommelein, I. D., CO Sept. 92, p594-611 see Tommelein, I. D., CO Dec. 92, p749-766

see Ozolin, Elmer W., (Ports '92, David Torseth, ed., 1992), p150-163

Hazen, Glenn A.

see Sargand, Shad M., ST Dec. 92, p3297-3314

Hazlett, Robert C., Jr.

see Loper, John, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p233-237

Computation of Turbulent Shear Flow Over Surface-Mounted Obstacle, with Charles C. S. Song, EM Nov. 92, p2282-2297

He, Jixing see Guralnick, Sidney A., ST June 91, p1815-1833

He, Shengqiu see Lefebvre, Xavier P., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p701-704

Headland, John

see Seelig, William N., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p326-340

Headland, John R.

A Computational Berthing Model for the Design of Fender Systems, (Ports '92, David Torseth, ed., 1992), p480-492

Design of Protective Dunes at Dam Neck, Virginia, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p251-267

Hears, George
Condition Monitoring of Structures Using Transient Response, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p127-138

Modal Analysis of Vibration Response for Condition Monitoring of Structures, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p940-943

Hearn, Robert B.

Site Impact Analysis Using the Tranplan Computer Model, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with L. P. Ledet, p82-83

Hearst, J. R.

see Nilson, R. H., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p710-716

Heath, Jason P.

see Grayman, Walter M., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p74-78.

see Bennett, P. C., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1826-1831

Heatwole, C. D.

see Kumar, D., IR Sept./Oct. 92, p757-775

Hecla, Curtis O.

cuum Alumina Unioader for Port of Everett, (Ports '92, David Torseth, ed., 1992), p143-149

Hedlund, John D.
Rehabilitating Irrigation Systems with USDA Water Quality Programs, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p286-293

Hegdal, Jean S.

see McCormick, Edward H., CE Jan. 92, p60-62

Heger, A. Sharif see Kerl, Felicia A., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p502-509

Heger, Frank J.
Public-Safety Issues in Collapse of L'Ambiance Plaza, CF
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disc: Clifford L. Freyermuth, CF May 92, p128-129 clo: CF May 92, p130-131 clo:

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Heidari, Manoutch see Ahlfeld, David, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1243

Heideman, John C.
Static Wave Force Procedure for Platform Design, (Civil
Engineering in the Oceans V. Robert T. Hudspeth, ed.,
1992), with Timothy O. Weaver, p496-517

Heidengren, Charles R. Settling Down Easy, CE Dec. 92, p72-74

Heidtke, Thomas M.

Partitioning Phosphorus Loads: Implications for Lake Restoration, with Martin T. Auer, WR Sept./Oct. 92, p562-579

Heiken, G.

Sulfur as a Lunar Resource, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with D. Vaniman and H. Hawkins, p555-564

Heiken, Jeremy

see Fieber, Julie, (Transportation Planning and Air Quali-ty, Roger L. Wayson, ed., 1992), p255-570

Heilman, P.

see Yakowitz, D. S., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p188-193

Heimbach, James A., Jr.

Targeting of Agl in a Utah Winter Orographic Storm, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Arlin B. Super, p553-558

see Wang, J. -Y., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1020-1023

Heitland, Gail W.

see Newbury, Claudia M., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p2093-2097

Heitzman, Gregory C.
see Cooper, Steven E., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p772-773

Hejl, Henry R., Jr.

see Dunn, David D., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p82-84

Helal, Maan

Preferred Orientation of Pore Structure in Cement-Grouted Sand, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Raymond J. Krizek, p526-540

p32b-34u; see Clarke, William J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p526-638 see Krizek, Raymond J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), p541-550

see Krizek, Raymond J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p712-724

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Helleckson, Brent

Evaluating Lunar Base Conceptual Designs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Richard Johnson and George W. Morgenthaler, p213-223

Helou, A. E.

see Rao, M. Gopala, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1587-1592

Evaluation of Proposed Port Facilities, Charleston Har-bor, South Carolina, (Ports '92, David Torseth, ed., 1992), p791-801

Verification Techniques Used in Modeling Charleston Harbor, South Carolina, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p257-262

Helweg, Otto J.

Helweg, Otto J.
Applying the ARMOS and MOFAT Models to a Major Oil Spill, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p385-590
ASCE Review and Publication Process for Technical Journals, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with William W-G. Yeh, p3-7
How to Improve Witing Skills (Irrigation and Drainage)

ed., 1992), with William W-G. Yeh, p.3-7
How to Improve Writing Skills, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p13-18
Migration of Spilled Oil from Ruptured Underground
Crude Oil Pipelines in the Memphis Area, (Lifeline
Earthquake Engineering in the Central and Eastern
U.S., Donald B. Ballantyne, ed., 1992), p140-152
On-Line Optimal Control of Urban Water Supply, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), with Shahram Pezeshk and Kenneth E. Oliver, p532-536

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Hemphill, R. C.

Perceived Risk Impacts from Siting Hazardous Waste Fa-cilities, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with B. K. Edwards and G. W. Bassett, Jr., p582-586

Hendershot, James see Gould, Marston, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p975-986

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Hendricks, Paul A.

see Metcaif, Megan, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p459-475

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Henneke, Markus J.

see Nanni, Antonio, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p655-665

Henninger, D. L. see Ming, D. W., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1709-1719

Henrich, P. Nonlinear Water Waves Generated by Submarine and Aerial Landslides, WW May/June 92, p249-266

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see Rubin, Edward S., EE Jan./Feb. 92, p120-134

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Henry, James F.

see Schmertmann, John H., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p215-228

Henry, Robert M.

vil Engineering Curriculum Computer Integration 1992, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1226-1233

Making Teamwork Work, CE Feb. 92, p68-69 disc. (of Using Conflict Management for Better Decision Making, by Amarjit Singh and Demetres A. Vlatas, ME Jan. 91, p70-82), ME Apr. 92, p212

Hensey, Melville

Organizational Design: Some Helpful Notions, ME July 90, p262-269 disc: Dean R. Stanphill, ME Jan. 92, p98-99 clo: ME Jan. 92, p99-100

Thoughts on Management of Acquisitions, ME Apr. 92, p130-137

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on, J. Michael

see Turpin, Paul D., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p175-179

on, Jeffrey W.

see Gresh, H. Wayne, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p55-60

Heason, Kimberly A.
see Booth, Pieter N., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p96-101

Hensy, Mel

Collective Excellence: Building Effective Teams, 1992, 0-87262-841-8, 110pp.

Hepler, Thomas E.
Innovative Spillway Designs, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1222-1227

Herakovich, Carl T.

see Lissenden, Cliff J., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1309-1322

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Herbich, John B.
Dredged Material Placement Techniques—A Review of Its Past, Present and Future, (Ports '92, David Torseth, ed., 1992), with R. Krishnamohan, p548-562
Should the U.S. Accept the Concept of Navigable Depth?, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Dilip Trivedi, Gordon Wilkinson and Allen Teeter, p1069-1082

Herbsman, Zohar Multiparameter Bidding System—Innovation in Contract Administration, with Ralph Ellis, CO Mar. 92, p142-150

Herlache, W. Andrew
Case History Evaluating Field Vane Correction Factors,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), with Craig A. Hall, Shahriar Vahdani and Henry
T. Taylor, p737-755

Hermann, O.W.

Borosilicate Glass (a.n) Sources Used With Origen-Type
Calculations, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. Salmon, p1272-1280

Hermann, S.
see Fannin, R. J., (Stability and Performance of Slopes
and Embankments II, Raymond B. Seed, ed. and
Ross W. Boulanger, ed., 1992), p1411-1426

Hermes, Mary disc. (of Portrait of a Manager, by Paul Tarricone, CE Aug. 92, p52-54), CE Oct. 92, p31

Hermsen, Willi
The New Munich Airport—Planning, Construction and
Opening of a New International Turnstile Airport in
Europe, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p148-154

Hernandez, Laura
Analysis of Two Lunar Oxygen Production Processes,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with H. A. Franklin, p576-585

Herminder Toca, Luis
Analysis of a Wharf for a Container Terminal, (Ports '92, David Torseth, ed., 1992), with José A. Arréllaga, p228-237

Hernried, Alan G.

Beam by the Finite Element Method, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1932), with Wei-Ming Bian, p924-927

Heroux, Jason P.

An Agenda for AEC PDES Research, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Douglas J. Peters, William J. Rasdorf and John W. Baugh, p376-385

Herrin, Janet C.
Interfacing with the Public on Water-Related Issues—
What TVA is Doing, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
with Arland W. Whitlock, p293-298

see You, Kwang-W., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p453-465

Swanson, ed., 1992, p43-3-405

Hertleia, Bernard H.

Learning to Love NDT, CE Jan. 92, p48-50
disc: Bryant Mather, CE Mar. 92, p32
clo: CE Mar. 92, p32,35

The Role of Nondestructive Testing in Assessing the Infrastructure Crisis, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p80-91

Hertz, Beth G.
see Males, Richard M., (Knowledge Acquisition in Civil
Engineering, Tomasz Arciszewski, ed. and Lewis
A. Rossman, ed., 1992), p105-123

Herzog, James D.
see Vinjamuri, Krishna, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1261-1271

ethodology for Validation of a Tampa Bay Circulation Model, (Estuarine and Coastal Modeling, Maicolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Kathryn Bosley, p83-94

Hetherington, Mark D. see Lawton, Evert C., GT Sept. 92, p1376-1394

Hetrick, B. A. see Banks, M. K., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p463-467

Hewlett, J. Christopher see Webb, Dennis W., (Ports '92, David Torseth, ed., 1992), p898-911

Heywood, Robert J.
A Multiple Presence Load Model for Bridges, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p579-582

Hickey, Ken

see Uber, James, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p772-777

Hickey, Thomas A. Recovery of Metals from Water Using Ion Exchange, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with David K. Stevens, p510-515

Hicks, F. E.

Characteristic Dissipative Galerkin Scheme for Open-Channel Flow, with P. M. Steffler, HY Feb. 92, p337-

Hicks, Jimmie C. Heavy Construction Estimates, With and Without Computers, CO Sept. 92, p545-560

Higasayama, Tetsumi see Ishikawa, Yoji, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1335-

High Level Radioactive Waste Management Program Committee, (James S. Tulenko, chma.) High Level Radioactive Waste Management, 2 vols., 1992, 0-87262-891-4, 2492pp.

Higley, Cathy

ruper, Camp Comparison of Delay and ICU Analyses—Case Study, (Site Impact Traffic Assessment: Problems and Solu-tions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Venu Sarakki, p21-25

Hijazi, Adib M. Modeling and Simulating Learning Development in Con-struction, with Simaan M. AbouRizk and Daniel W. Halpin, CO Dec. 92, p685-700

Hijazi, Hasem see Pamukcu, Sibel, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1285-1297

Hilchey, John D. see Nein, Max E., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 809-1831

Hildemann, Lynn M. see Lin, Jin-Sheng, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p7-11

ome Case Histories of Armor Stone Production, (Dura-bility of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p212-221

Hill, Sine
FM—An Educated, Integrated Approach, (Computing in
Civil Engineering and Geographic Information Systems
Symposium, Barry J. Goodno, ed. and Jeff R. Wright,
ed., 1992), with Cynthia Hallman and Richard Berner,
p33-40

Hill, Stephen D. Regulators: Don't Overlook Public Interest (ltr), CE Sept. 92, p37

Hilley, James R., Jr. see Ashe, Kenneth L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2056-2061

Hilliard, M. R.

see Harrison, I. G., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1324-1329

Hiltunen, Dennis R.
Measurement of Airfield Pavement Response Under
Moving Aircraft Loads, (Road and Airport Pavement
Response Monitoring Systems, Vincent C. Janoo, ed.
and Robert A. Eaton, ed., 1992), with Albert J. Bush,
III., p336-351

Engineering Women Into the Workplace, CE Nov. 91, p66-67

disc: Elisabeth Frye, CE Feb. 92, p31 disc: Laurie Broderick, CE Mar. 92, p38,40

Hinds, James K. see Tatto, Stephen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p323-340

Hines, James M.
Mechanical Equipment Requirements for Inflatable
Lunar Structures, with Craig E. Miller and Richard M.
Drake, AS Apr. 92, p248-256

Hines, Joy A. see Allen, Carlton C., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-1218

Hinkkanen, Heikki see Ahokas, Henry, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1092-1098

Hinte, James B. see Daley, David J., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p642-647

n, Steven W.

Hinton, Steven W. NCASI Experiments Related to Validation of Sediment-Water Column Exchange Models for Hydrophobic Chemicals, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Ray C. Whittemore, p387-389

Hinze, Jimmie

Hilde, Jimmie Role of Designers in Construction Worker Safety, with Francis Wiegand, CO Dec. 92, p677-684 disc. (of Safety Programs and The Construction Manager, by G. R. Smith and R. D. Roth, CO June 91, p360-371) with Anne Kusaka, CO Sept. 92, p629-630

Hinze, William J. see Daudt, Carl R., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p442-449

HIPMA, RAZUM Structural Reliability of Seismic Isolation System, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), with Kenji Shirahama and Takahiro Somaki, p57-60

Hirrel, Timothy D. disc. (of Water's New World, by Laura Lang, CE June 92, p48-50), CE Aug. 92, p30

Hirschman, Ira A Competitive Framework for Evaluating the Economic Benefits of Port Improvements, (*Ports* '92, David Tor-seth, ed., 1992), with Ogden Beeman, p363-576

Hirsh, Bill

A New Fast Track for Public Works, CE Feb. 92, p45-47

see Kraus, D. D., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p299-304

Hixson, Mark A. see Khondker, Sufian A., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p912-918

Hjalmarson, Hjalmar W. New Look at Regional Flood-Frequency Relations for Arid Lands, with Blakemore E. Thomas, HY June 92, p868-886

Hjelmfelt, A. T., Jr. see Lenau, C. W., HY June 92, p918-933

Hjelmfelt, Allen T., Jr. Investigation of Curve Number Procedure, HY June 91, p725-737

disc: Donald E. Woodward and Roger Cronshey, HY June 92, p951 clo: HY June 92, p952

Hjelmstad, K. D.

Mutual Residual Energy Method for Parameter Estima-tion in Structures, with S. L. Wood and S. J. Clark, ST Jan. 92, p223-242

see Banan, M. R., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p571-574

Hjert, T.
see Roth, W. H., (Stability and Performance of Slopes and
Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p940-955

Ho, Carlton L.

see Fragaszy, Richard J., GT June 92, p920-935

Ho, P. S.

HAO, P. S. A Preliminary Evaluation of the Adsorption of Lindane, Silvex and 2,4-D in Single and Multicomponent Systems onto Whole Soil and Soil Organic Fractions, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with W. F. McTernan, p364-369

Hobbs, Benjamin F.

see Loaiciga, Hugo A., HY Jan. 92, p11-37

Hobeika, Antoine G. see Trani, Antonio A., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24

Hobelman, A. G. see O'Rourke, T. D., ed., Excavation and Support for the Urban Infrastructure

Hobish, Mitchell K.

Chemical Analysis in Space Exploration: A Lunar-based Chemical Analysis Laboratory (LBCAL), (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Charles W. Gehrke, Cyril Ponnamperuma and Robert W. Zumwalt, p565-573

Hoda, S. Khurshidul

see Khasabasis, S., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p983-990

Hodge, Charles S.

Pricing of Services, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1089-1094

True Costs, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1095-

Hodges, Christopher P. Rehabilitation of Chloride Damaged Concrete, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p483-491

Hoefler, Brian G.

Systems-Engineering Methodology for Engineering Plan-ning Applications, with Brian W. Mar, El Apr. 92, p113-128

Hoekstra, Ammo
Coastal Engineering Design Codes in the Netherlands,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), with Krystian W. Pilarczyk, p1037-1054

Hoffman, Paul C.
Experimental Study of the Transient Temperature Distributions in Concrete, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Stanley K. Ciesielski, p200-203

Hofseth, Keith D.

Taylor, Daniel B., (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p148-179.

Hogan, Harry A. Mechanical Characterization of the Soft Tissue in Horse Hooves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with David M. Hood, p147-150

Hogan, Scott A. see Abt, Steven R., HY Oct. 92, p1424-1434

Hogan, Steve
Traffic Impact Analysis Standardization—The Orange
County, California Experience, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell,
ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992),
with Jerry Ingram and Kari Rigoni, p99-103

disc. (of Short-Duration Rainfalls in Sicily, by Giovanni B. Ferreri and Vito Ferro, HY Mar. 90, p430-435), HY Jan. 92, p107-109

Holland, Jeffery P.

Development of a Comprehensive Modeling System for Remediation of Contaminated Groundwater, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1178-1183

Holland, Peter J.

Frounda, Feter J.

Extraction of Potable Water from Urine for Space Applications, (Engineering, Construction, and Operations in Space III), Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Donald M. Bird and Carolyn L. Miller, p1680-1689

Carolyn L. Miller, p1680-1689
Holley, E. R.
Model for Pollutant Transport by Eddy Simulation, (H)draulic Engineering: Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992), with Y. C. Su, G. H. Ward
and R. de Souza, p593-598
see Sibetheros, I. A., HY Oct. p1, p1332-1351
see Su, Y. C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p243-248

Hollingworth, F.
Roller Compacted Concrete Arch/Gravity Dams—South
African Experience, (Roller Compacted Concrete III,
Kenneth D. Hansen, ed. and Francis G. McLean, ed.,
1992), with J. J. Geringer, p99-116

Holly, Forrest M., Jr.
see Hsu, Shaohua Marko, HY Aug 92, p1135-1152
see Meselhe, Ehab A., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p1124-1129

see Branch, K., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p156-160

Holm, T. A.

High Strength, Low Permeability Garage Rehab Concrete, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with T. W. Bremner, p363-372

Holstein, Elgie see Niedzielski-Eichner, Phillip A., (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1927-1937

Geosynthetics, Roy H. Borden, ed., Robert O Holtz, ed. and Ilan Juran, ed., 1992), p1006-1018

Holtz, Robert O.

see Borden, Roy H., ed., Grouting, Soil Improvement and Geosynthetics

Holtz, Wesley G. disc. (of Lessons Learned from Compacted Clay Liner, by Bill R. Elsbury, David E. Daniel, Gregory A. Sraders and David C. Anderson, GT Nov. 90, p1641-1660), GT Apr. 92, p660-662

Holzapfel, Eduardo A. see Chávez-Morales, Jesús, IR Jan./Feb. 92, p74-87

Holzbach, J. F. disc. (of L'Ambiance Plaza: What Have We Learned, by Virginia Fairweather, CE Feb. 92, p38-41), CE July 92, p36

Holzhausen, Gary R. see Egan, Howard, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p538-551

Hong, Y.
The Use of Influence Diagrams in Risk Management Involving Multiple Stakeholders, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), with G. E. Apostolakis, p331-337

Honga, E. U. see Rao, M. Gopala, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1587-1592

Hood, David M. see Hogan, Harry A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p147-150

Hood, Frank C.
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Hoogenboom, P. J. see Smedema, L. K., IR Nov./Dec. 92, p841-851

Hook, Gregory S.

Wave Exciting Forces on a Platform Fixed in Nonlinear
Shallow Water Waves, (Civil Engineering in the Oceans
V, Robert T. Hudspeth, ed., 1992), with Cheung H.
Kim and Erick Huang, p311-325

Hooke, Adrian

see Hansen, Elaine, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1523-

Hooley, Roy see Moncarz, Piotr D., CF Nov. 92, p232-245

see Moncarz, Forto, G.F. 1809, 92, p.232-239.
Hoopes, John see Rashad, Salwa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.180-185.
see Tsay, Tswn-Syau, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.790.

Hoopes, John A. see Sakti, Joni P., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p201-207

Hoorelbeke, J. M. see Girotto, J. L., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p779-783

Hopkins, Mark A.
A Discussion of the Numerical Modeling of Sea Ice Ridging, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p888-891

Hopkins, P. L. see Siegel, M. D., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1972-1984

Hopman, Dennis R. Lessons Learned from Elk Creek Dam, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p162-180

Hopmans, J. W. see Vogel, T., IR Sept./Oct. 92, p791-806

Hora, Stephen C. Acquisition of Expert Judgment: Examples from Risk As-sessment, EY Aug. 92, p136-148

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Fly-Ash Slurry Island: I. Theoretical and Experimental Investigations, with Masataka Taketsuka, Takuro Odawara and Hiromi Kawasaki, MT May 92, pl 17-133

Horlacher, H. B. disc. (of Confidence Interval for Design Floods with Esti-mated Skew Coefficient, by Jahir Uddin Chowdhury and Jery R. Stedinger, HY July 91, p811-831), HY July 92, p1074-1076

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Horvath, John S.
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Foundations, by C. V. Girija Vallabhan and Y. C. Das,
GT June 91, p956-966), GT Sept. 92, pl482-1484

GI June 91, p936-900), GI 34, 25, p140-824, M. U. see Ahmad, M., ST Nov. 92, p3222-3236 see Oguejiofor, E. C., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1212-1219 see Sakr, K. M., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p888-893

Hoshiya, Masaru
Extended Kalman Filter-Finite Element for Geotechnical
Problems, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), with
Atsushi Sutoh, p128-131
Updatting of Dynamic Structural Systems by Learning,
(Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Yasuyoshi
Obuchi and Shigeru Noda, p124-127

Hosking, J. R. M.

Regional Frequency Analysis Using L-Moments, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Bennings, ed. and Nani G. Bhowmik, ed., 1992), with J. R. Wallis, p13-18

Hossain, A. S. M. Mustaque Monitoring of Highway Pavements in Arizona Using Falling Weight Deflectometer, (Road and Airport Pave-ment Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Larry A. Sco-field, p.75, 290 field, p276-290

Hossain, M. Akram Finite Element Modeling of Single-Solute Activated-Carbon Adsorption, with David R. Yonge, EE Mar./ Apr. 92, p238-252

Hossain, Mustage

Prossana, Nussague Performance of Recycled Asphalt Concrete Materials in an Arid Climate, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), with Larry A. Scoffield, p415-427

Hosseinipor, E. Zia

A Survey of Vadose Zone Flow and Transport Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Vincent M. Gorokhovski, p186-191

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disc. (of Drownproofing of Low Overflow Structures, by Hans J. Leutheusser and Warren M. Birk, HY Feb. 91, p205-213) with Max Comstock, HY Nov. 92, p1586-1589

Hou, Zhikun Vibration Control of Highway Bridge Under Earth-quakes, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Gongkang Fu, p176-179

Honck, Carl P.
Non-Traditional Water Quality Approaches, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Joan Brooks, Ronald D. French and Duane Humble, p433-438

Houck, Mark H.

Houck, Mark H.
see Karamouz, Mohammad, WR Jan/Feb. 92, p71-81
see Lutz, Charles H., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p108-113
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Houghton, David L.

Retrofitting a Landmark, CE Feb. 92, p55-57

Houghton, Tim

Houghton, 11m Quality Assurance at a High Level Waste Plant—The Successful Approval of WVP, Sellafield to BS5882/ ISO9002, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p562-565

Houston, S. H.
see Peene, S. J., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan
Blumberg, ed., Rajbn Cheng, ed. and Craig Swanson, ed., 1992), p357-369

Houston, Sandra L.
Sample Disturbance of Cemented Collapsible Soils, with
Mostafa El-Ehwany, GT May 91, p731-752
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disc: Kyle M. Rollins, Ralph L. Rollins and G.
Wayne Rogers, GT Nov. 92, p1856-1859
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clo: GT Nov. 92, p1856-1859
clo: GT Nov. 92, p1859-1862
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Houston, William N.
Laboratory versus Nondestructive Testing for Pavement
Design, with Michael S. Mamlouk and Rohan W. S.
Perera, TE Mar/Apr. 92, p207-222

Hovan, Michel J.

Thaw Weakening Research at the Minnesota Road Research Project, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with David E. Newcomb, p138-

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disc. (of Lateral Analysis of Piers Constructed on Slopes, by Mohammed A. Gabr and Roy H. Borden, GT Dec. 90, p1831-1850), GT June 92, p969-970

Howard, Craig see Rentzis, Dimitris, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p21-24

1992), p21-24

Howard, H. Craig

Linking Design Data with Knowledge-Based Construction Systems, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p746-753

Primitive-Composite Approach for Structural Data Modeling, with Jamal A. Abdalla and D. H. Douglas Phan, C.P. Jan. 92, p19-40

see Phan, D. H. Douglas, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p394-401

see Rafiq, Taufiq, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p386-393

Howard, William S.

Howard, William S.
see Chung, Paul Y.,
see Chung, Paul Y.,
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p220-225

Howell, Christopher T. see Triantafyllou, Michael S., EM Apr. 92, p807-830

Howes, H. A. see Stevens-Guille, P. D., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p250-255

Howland, Jonathan D.
Stability Analysis of a Municipal Solid Waste Landfill,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), with Arvid O. Landva, p1216-1231

Howles, Ariin C.
see Dykes, Russell S., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p244-249

Howlett, E.

Howlett, E. see Spaulding, M. L., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p15-174.
see Spaulding, M. L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175

Howlett, Eoin see Swanson, J. Craig, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p489-500

Hoyinck, Wim Th.

Pre-Selective Measurements for SHRP-NL Project Using the Lacroix Deflectograph, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Joop van Zwieten, p63-77

Hrma, Pavel R.

First-Order Model for Durability of Hanford Waste Glasses as a Function of Composition, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Gregory F. Piepel, Michael J. Schweiger and Donald E. Smith, p1236-1243

Hrudey, T. M. see Khoo, H. A., EM Feb. 92, p259-279

Hryciw, Roman D.

Design of Anchored Geosynthetic Systems for Slope Stabilization, (Stability and Performance of Slopes and Embankments II, Raymond B, Seed, ed. and Ross W. Boulanger, ed., 1992), with Kamarudin Haji-Ahmad, Pullent Sifes.

Pullout Stiffness of Elastic Anchors in Slope Stabilization Systems, with Masyhur Irsyam, GT June 92, p902-919 see Thomann, Thomas G., (disc), GT July 90, p1095-1115

Hale, Machine see Chang, Luh-Maan, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p299-310

White, ed., 1992), p299-310
Hsieh, Bernard B.
Release Alternatives on a 3-D Salinity Simulation, (H)-draulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p237-242
Sensitivity of Flow and Salt Transport to Uncertainties at Open Boundaries: A 3-D Experience, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Billy H. Johnson, p720-732.

Hsieh, C. C.

see Kareem, Ahsan, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p459-462

Hsieh, Chu-Chin
Estimating VOC Emission Rates in Aeration Systems, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Michael K. Stenstrom, p73-78 see Tzeng. Chwen-Jeng. (Environmental Engineering: Tzeng. Chwing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p67-72

Hsieh, P. C. see Huang, L. H., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p336-340

Hsu, C. W.
see Ritter, J. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p549-556

Hsu, Cheng-Tzu Thomas see Wang, Gang Gary, ST Sept. 92, p2590-2609

Hsu, D. S. see Yeh, Yi-Cherng, CP Apr. 92, p200-219

The Drought Occurrence and Response Measures in Taiwan Area, 1991, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Jinn-Chuang Yang, p977-987

Hisa, Nies-Sheng
Modeling of a Large-Scale Water Distribution System,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Peter W. F. Louie and
William W-G. Yeh, p598-603
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Hss., Shaohua Marko Conceptual Bed-Load Transport Model and Verification for Sediment Mixtures, with Forrest M. Holly, Jr., HY Aug. 92, p1135-1152

Hsu, Sheng-Yung
Seismic Analysis Design of Frames with Viscoelastic
Connections, with Apostolos Fafitis, ST Sept. 92,
p2459-2474

Hsa, T. M.

Application of Fracture Mechanics Methodology to Assessment of Weld Defects in Offshore Platforms, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), with E. W. Carter, S. L. Fu and J. S. Mitchell, p733-749

Hsu, Tai-Wen

Wave Induced Vortex Near Seashore, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Shan-Hwei Ou and Chun-Wei Sun,

Hsu, Yuen-Hung see Lu, Yean-Jye, TE Mar./Apr. 92, p223-240

See Liu, Nam., Yick see Koerner, Robert M., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p63-109

Hu, Chaobin see Tang, Jiuru, ST Feb. 92, p341-358

Hu, Guangdou see Morris, Gregory L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p630-635

Hu, Jialou

see Liang, Robert Y., EM Feb. 92, p384-396 see Liang, Robert Y., EM July 92, p1468-1487

FIR, S. See Luettich, R. A., Jr., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p632-643

Hu, Sup-Los James
Intermittent Kinematics for Nonlinear Random Waves
Near Ocean Surface, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), with
Dongsheng Zhao, p91-94
Kinematics of Nonlinear Random Waves near Free Surface, with Dongsheng Zhao, EM Oct. 92, p2072-2086
Responses of Nonlinear Oscillators Excited by NonGaussian Pulse Processes, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p144-147
see Sumanuskajonkul, Somchai, (Engineering Mechanics,
see Sumanuskajonkul, Somchai, (Engineering Mechanics,

1992), p144-147

see Sumanuskajonkul, Somchai, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), p196-199

see Tsiatas, George, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p416-419

Hua, Hesong
Accurate Method for Calculation of Saturation DO, EE Sept./Oct. 90, p988-990

disc: Jeffrey S. Lovell, Timothy J. Register, Steve C. McCutcheon and Thomas O. Barnwell, Jr., EE Sept./Oct. 92, p822-824 clo: EE Sept./Oct. 92, p824-826

Hua, Shi-Qian see Yeh. William W.-G., WR Nov./Dec. 92, p636-653

Hus, Zhoagling
see Xue, Zhihuai, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p376-381

Huang, A. B.
see Lee, J. S., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p417-420

Huang, An-Bin
Discontinuous Deformation Slope Stability Analyses,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), with Max Y. Ma, p479-492
see Ma, Max Y. (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p721-724

Huning, C. M. S., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p516-519

Huang, Ching-Chuan see Leshchinsky, Dov, GT Oct. 92, p1559-1576 see Leshchinsky, Dov, GT Nov. 92, p1748-1764

Huang, Ching-Jer see Chwang, Allen T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p353-356

Huang, Ching-Lun see Loa, Wei-Whua, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p243-249

ment Program Committee, 1992), p243-249

Huang, Dougzhou
Impact Analysis of Continuous Multigirder Bridges due
to Moving Vehicles, with Ton-Lo Wang and Mohsen
Shahawy, ST Dec. 92, p3427-3447

see Wang, Ton-Lo, (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p309-316

see Wang, Ton-Lo, (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p679-686

see Wang, Ton-Lo, ST May 92, p1354-1374

see Wang, Ton-Lo, ST May 92, p2222-2238

Huang, Erick

Huang, Erick

see Hook, Gregory S., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p311-325

Huang, Jian-Yuan see Kou, Chang-Huan, ST Oct. 92, p2890-2910

Huang, L. H.

Huang, L. H. Influence of Seafloor on Acoustic Plane Wave, EM Oct. 92, p1987-2004
Noise Barrier Simulated by Rigid Screen with Back Wall, with T. M. Kung, EM Jan. 92, p40-55
Reflection and Transmission of Water Wave by Porous Breakwater, with H. I. Chao, WW Sept./Oct. 92, p437-

42.2 Water Wave Generated by a Porous Wavemaker, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with P. C. Hsieh and G. Z. Chang, p336-340

Huang, Poshu see DiLorenzo, Joseph L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p151-157

Huang, Tien-Kuen Simple Procedure for Determining Cap-Plasticity-Model Parameters, with Wai-Fah Chen, GT Mar. 90, p492-513

sc: Dana N. Humphrey, GT Apr. 92, p637-640 c: GT Apr. 92, p640-643

Huang, Y. Henry disc. (of Proposal for Structural Design Peer Review, by Rubin M. Zallen, CF Nov. 90, p208-215), CF Aug. 92,

Huang, Y. P. see Chan, H. C., ST Aug. 92, p2118-2132

Huang, Yu Ping see Raoof, Mohammed, EM Dec. 92, p2335-2351 see Raoof, Mohammed, ST Dec. 92, p3255-3267

Hubbell, Jeffrey T.

Modern Crane Control Enhancements, (Ports '92, David Torseth, ed., 1992), with Bruce Koch and Dennis Mc-Cormick, p757-767

Huber, Frank

Update: Bridge Scour, CE Sept. 91, p62-63 disc: Thomas J. Fenner, CE June 92, p37

Huber, Wayne C.

Urban Nonpoint Source Control Strategies Outside
North America, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p617-

Hudec, Peter P. see Akpokodje, Enuvie G., MT Feb. 92, p58-70

Hudson, C. A.

Husson, C. A. Finite Element Analysis and Design of Bridges in a Distributed Computing Environment, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with M. A. Austin, p671-678

Hudspeth, Robert

see Borgman, Leon, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p444-466

Huebner, Paul M. see Gordon, Mark E., GT Aug. 89, p1148-1160

Huebner-Moths, Janls see Moore, Gary T., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p224-239

Huerta, Antonio see Pijaudier-Cabot, Gilles, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p620-623

Huff, Dennis J.
see Clyde, Eric S., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p287-292

Huff, Winston

Space Station & Lunar/Mars Life Support Research, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1690-1700

Huffstwier, Michael see Corneille, Richard, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p315-320

Hüssenberg, R., see Janberg, K., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p385-394 see Spilker, H., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1221-1230

Hughes, David K. see Klein, Stephen J., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p305-922

Hughes, Steven A. Coastal Engineering Practice '92, 1992, 0-87262-866-3, 1100pp. Estimating Wave-Induced Bottom Velocities at Vertical Wall, WW Mar./Apr. 92, p175-192

Hughes, W. C.
Unit Hydrograph Derivation Using Geographic Information System, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), with L. E.
Johnson, K. S. Medde and L. Tunnell, p7-12

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Huhtala, Matti

Strain and Stress Measurements in Pavements, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Ealon, ed., 1992), with Jari Pihlajamäki, p.229-243

Hull, J. Q. see Wang, M. C., EE Nov./Dec. 92, p848-864

Hulme, T. W. Bored Tunneling for Singapore Metro, with A. J. Bur-chell, CO June 92, p363-384

Hultgren, Edwin M. see Tillis, R. Kevin. (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p775-787

Humble, Duane
see Houck, Carl P., (Environmensal Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1922), p433-438

Humphrey, D.

see Reyna, F., (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1225-1236

Humphrey, Dana N

Properties of Tire Chips for Lightweight Fill, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with William P. Manion, p1344-1355
disc. (of Simple Procedure for Determining Cap-Plasticity-Model Parameters, by Tien-Kuen Huang and Wai-Fah Chen, GT Mar. 90, p492-513), GT Apr. 92,

Hunaiti, Yasser M.

Bond Strength in Battened Composite Columns, ST Mar. 91, p699-714 disc: C. N. Srinivasan, ST Apr. 92, p1153-1156

Intra Vena Cava Balloon Pumping, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Thomas E. Natan, Hua-qiang Li, Frank R. Walters and Brack G. Hattler, p709-712

see Chen, Bang-Fuh, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p345-348

Hunt, Arlon J.

Aerogel—A Transparent, Porous Superinsulator, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p398-403

Hunt, Carlton D.

see Bonner, James S., EE Jan./Feb. 92, p101-119

Hunt, James R. see Luthy, Richard G., El Oct. 92, p361-380

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Hunter, Mark R.

Trickle Channel Rehabilitation, (Water Resources Planning and Management: Saving a Threatened Resource-in Search of Solutions, Mohammad Karamouz, ed., 1992), p504-509 Mohammad

Hunter, Matthew F.

Pile Lateral Load Test in the Port of Los Angeles, (Ports '92, David Torseth, ed., 1992), with Allen M. Yourman, Gerald M. Diaz and Hsueh-Hsin Chu, p322-335 see Yourman, Allen M., Jr., (Ports '92, David Torseth, ed., 1992), p376-389

Hurd, John O.

see Sargand, Shad M., ST Dec. 92, p3297-3314

Hurtienne, Walter E.

see Lott, Jonathan W., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p487-502

mand, B.

see Anderson, D. G., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p973-989

Hussein, Ahmed S. A.

Evapotranspiration in Sudan Gezira Irrigation Scheme with Ahmed K. El Daw, IR Nov./Dec. 89, p1018-1033 disc: H. G. Farbrother, IR May/June 92, p498

Hussein, R. Effects of Bonding Stiffness on Thermal Stresses in Sand-wich Panels, with P. Fazio and K. Ha, AS Oct. 92, p480-490

Huston, D.

Concrete Beam Testing with Optical Fiber Sensors, (Non-destructive Testing of Concrete Elements and Struc-tures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with P. Fuhr, P. Kajenski and D. Snyder, p60-69

Hutchens, Peyton E.
Risk Reduction Through Indemnification Contract
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Hutchison, William R.

see Brown, Russ T., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1042-1048

Hutson, Nick D.

The Behavior and Effects of the Noble Metals in the DWPF Melter System, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Mike E. Smith, p541-548

A Pilot Scale Demonstration of the DWPF Process Con-trol and Product Verification Strategy, (High Level Rad-dioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Carol M. Jantzen and D. Chris Beam, p525-532.

Huttelmaier, H. Peter

rusttetmater, H. Peter
Ropeway Material Handling Systems for Lunar Mining
Sites, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), with Jonathan R. Carrick,
p1116-1126

Huttenbach, Robin C.

see Nixon, David A., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p850-

Hutton, Paul H. Simulating THM Formation Potential in Sacramento Delta: Part I, with Francis I. Chung, WR Sept./Oct. 92, p513-529

Simulating THM Formation Potential in the Sacramento Delta: Part II, with Francis I. Chung, WR Sept./Oct. 92, p530-542

Hutton, Richard L.

see Motz, Louis H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-286

Hwang, C. L.
see Wang, M. L., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
p531-534

Hwang, Eul-Seng see Maragakis, Emmanuel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p67-70

Hwang, H. see Shinozuka, M., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballan-tyne, ed., 1992), p43-57

Hwang, Howard H. M.
Seismic Hazard Along a Central U.S. Oil Pipeline, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p110-124

Hwang, Lih-Shinn see Chen, Chun-Sung, SU Feb. 92, p24-32

Hwang, Ned H. C. see Wang, Shi-kang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p697-700

Hwang, Raiph see Saleh, Rohin S., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p798-803

Hyden, A. M. see Randolph, M. F., GT May 92, p743-759

Hynes, M. E.

Hynes, M. E. see Marcuson, W. F., III., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p552-592 see Sykora, D. W., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005

Hypes, Warren D.

Design and Technology Assessment of Three Lunar Habitat Concepts, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Robert L. Wright and Marston J. Gould, p249-259

IAHR Working Group on Wave Generation and Analysis List of Sea-State Parameters, WW Nov./Dec. 89, p793-

disc: Gerbrant Ph. van Vledder and Jurjen A. Battjes, WW Mar./Apr. 92, p226-228 clo: WW Mar./Apr. 92, p228-230

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Ibbs, C. William

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see Songer, Anthony D., CP Oct. 92, p456-471

Behaviour of Prestressed Concrete End Blocks, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with C. J. Burgoyne, p135-138

Ibison, Margaret A.

see Buchanan, Thomas J., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p426-431

Ibrahim, Yaacob

Calibration Strategy for Urban Catchment Parameters, with Shie-Yui Liong, HY Nov. 92, p1550-1570

Ichihashi, Yoshiomi

Jet Grouting in Airport Construction, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Mitsuhiro Shibazaki, Hiroaki Kubo, Masahiro Iji and Akira Mori, p182-193

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see Juran, Ilan, GT Feb. 90, p312-329

see Magette, William L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p407-412

Igarashi, Shin-ichi

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see Sinha, R., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p447-450

see Xu, K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p453-456 see Xu, K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p693-696

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see Xu, Kangming, EM July 92, p1387-1405

lizuka, Minoru

see Frangopol, Dan M., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p551-554

see Ichihashi, Yoshiomi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193

see Miyasaka, Gohichi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p144-155

Ikeda, Jon
The Airport Traffic Control Tower for the New Denver
International Airport, (International Air Transportation: A New International Airport, Robert E. Boyer, ed.,
1992), with Hans Conradt, p250-257

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Ikenberry, T. A. see Shipler, D. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1200-1204

Ilias, Shamsuddin

see Singh, Aject. (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1953-1958

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Imbsea, Roy A.

AASHTO Bridge Design System—An Engineering Software with Formal Database Management, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Toorak Zokate, p663-670

rso, Thom

see Fangmann, Steve, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274

Inan, Mehmet Housing America in the Twenty-First Century, 1992, 0-87262-898-1, 127pp.

Indraratna, B.

Performance of Test Embankment Constructed to Failure on Soft Marine Clay, with A. S. Balasubramaniam and S. Balachandran, GT Jan. 92, p12-33

Indramana, Buddhima
Problems Related to Disposal of Fly Ash and its Utilization as a Structural Fill, (Utilization of Waste Materials
in Civil Engineering Construction, Hilary I. Inyang, ed.
and Kenneth L. Bergeson, ed., 1992), p274-285

Ingraffea, A. R.

see Grigoriu, Mircea, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p443-446

Ingraffea, Anthony R. see Agogino, Alice M., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p356-363

Ingram, Jerty eve. (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p99-103

Ingram, John J.
Hydraulic Structures Versus Zebra Mussels, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Andrew C. Miller, p606-611

Inouye, Randall R.
The Great Chicago Flood of 1992, with Joseph D.
Jacobazzi, CE Nov. 92, p52-55

Inyang, Hilary I.
Utilization of Waste Materials in Civil Engineering Construction, with Kenneth L. Bergeson, ed., 1992, 0-87262-907-4, 358pp.

Ioannides, Anastasios M.

Analysis and Design of Doweled Slab-on-Grade Pavement Systems, with George T. Korovesis, TE Nov./ Dec. 92, p745-768 see Khazanovich, Lev, (disc), EM Aug. 90, p1723-1732

Ioannides, Socrates

Tomorrow's Schools, with Robert P. Beall, CE Jan. 92, p56-58

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Ireson, Robert G.
Generating Detailed Emissions Forecasts Using Regional
Transportation Models: Current Capabilities and Issues, (Transportation Planning and Air Quality, Roger
L. Wayson, ed., 1992), with Julie L. Fieber and Marianne C. Causley, p142-160

Iribarren, José R.
Experimental Studies for the Port of Bilbao Extension,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), with Maria J. Martín, p149-157

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Can Civil Engineers Make the Difference by Involvement in the Political Process?, El Oct. 89, p441-445 disc: Eugene H. Harlow, El Jan. 92, p83-85 disc: Laura J. Steinberg, El Jan. 92, p85-87

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Isaacs, Thomas H.
Benefits of International Technical Collaboration, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p28-32

1992), p28-32

Isaacson, Michael
Time-Domain Second-Order Wave Diffraction in Three
Dimensions, with Kwok Fai Cheung, WW Sept./Oct.
92, p496-516
Wave Effects on Offshore Structures—Some Recent Research, (Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p381-426
Wave Slamming on a Horizontal Circular Cytinder, (Civil
Engineering in the Oceans V, Robert T. Hudspeth, ed.,
1992), with Sundar Prasad, p652-666
Wave-Current Interaction with a Large Structure, (Civil
Engineering in the Oceans V, Robert T. Hudspeth, ed.,
1992), with Kwok Fai Cheung, p66-80

Least T.

1972.), white Davids of the State of the

Ishai, Ilaa Pavement Improvement with Asphaltic Membranes, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Nathan Livnat and Moshe Livneh, p1067-

Ishaq, Achi M.

Surface and Subsurface Drainage of Metropolitan City in Arid Zone, IR Jan./Feb. 92, p19-35

Ishibashi, Isao disc. (of Effect of Soil Plasticity on Cyclic Response, by Mladen Vucetic and Ricardo Dobry, GT Jan. 91, p89-107), GT May 92, p830-832

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Ishii, Seiichiro

see Jahren, Charles T., (Ports '92, David Torseth, ed., 1992), p493-505

Ishikawa, Yoji
Simple and Efficient Methods to Produce Construction
Materials for Lunar and Mars Bases, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), with Tetsuo Sasaki and Tetsumi Higasayama,
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Gwynne, Owen, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p89-99

Iskander, Magued Review of API Guidelines for Pipe Piles in Sand, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with R. E. Olson, p798-812

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Wind-Induced Response of Structurally Asymmetric
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Iurael, Morris Managing Existing Reservoirs to Meet New Challenges, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), with Jay R. Lund, p673-mad Karamouz, ed., 1992), with Jay R. Lund, p673-

see Lund, Jay R., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p486-491

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ed. and John M. Niedzwecki, ed., 1972), p200-20-18sa, M. A.
Fracture Surface Characterization of Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. M. Hammad and A. Chudnovsky, pl 27-130

A New Probabilistic Model for the Fracture Toughness of Concrete, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with M. Gorelik and A. M. Hammad, p467-470

Refined Analysis of Load Distribution Factors for Brides, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Huiming Li, M. Arockiasamy, M. Shahawy and M. Issa, p260-263

Issa, Raja R. A.

Jasa, Raja R. A. Microcomputer Analysis of Guyed Towers as Lattices, with R. Richard Avent, ST Apr. 91, p1238-1256 disc: S. S. Bhavikatti and B. P. Mallikarjuna, ST July 92, p1983-1984
Predicting Tower Guy Pretension Using a Neural Network, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Desmond Fletcher and Ruth Ann Cade, p1074-1081

Novel Photoelastic Approach in Analysis of Elliptical Holes in Thick Plates, with G. A. Maamoun, EM Aug. 92, p1631-1645

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Operations in Space III, Willy Z. Sadeb, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p22642270

Itagaki, Sachiko see Bicknell, Jill C., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 9451-456

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Yesa, Wilfred D. see Moser, Michael A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992),

Iwankiw, N. R.

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Iwasa, Hiroms see Shimada, Shunsuke, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p325-336

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Izbicki, John A.

H and I<sup>4</sup>C as Tracers of Ground-Water Recharge, (Irri-pation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), with Robert L. Michel and Peter Martin, p122-127

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See Cohen, Wendy L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p63-68

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Jackson, C. E., Jr.
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Jan. 92, p56-59

Jackson, D. R.
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Jackson, Harry E.
Overtopping Protection Using Roller-Compacted Concrete, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1216-1221

Jackson, L. Angus see Smith, A. W. Sam, (Durability of Stone for Rubble See Smith, A. W. Sam, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p138-150

Jackson, Paul A. disc. (of Behavior of Isotropic R/C Bridge Decks on Steel Girders, by I. -K. Fang, J. Worley, N. H. Burns and R. E. Klingner, ST Mar. 90, p659-678), ST Mar. 92, p860-

Jackson, Timothy
see Mierzejewski, Edward A., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell,
ed., Nagui Rouphail, ed. and T. C. Sutaria, ed.,
1992), p128-132

Jackson, Timothy T.

The Traffic Impact Study and Traffic Impact Fees, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Plaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p228-232

Jacob, Klaus H.

Seismic Hazards in the Eastern U.S. and the Impact on Transportation Lifelines, (Lifeline Earthquake Engi-neering in the Central and Eastern U.S., Donald B. Bal-lantyne, ed., 1992), 958-71

Jacobazzi, Joseph D. see Inouye, Randall R., CE Nov. 92, p52-55

Jacobi, Lee A.

Brackish Groundwater Desalting in Southern California: A Summary of Case Studies, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), with Julius Y. Ma and William R. Everest, p587-592

see Bruttomesso, Douglas A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p256-259

Jacobs, Timothy L.

A Chance Constrained Optimization Model Using Kinematic Wave Routing for Stormwater Infrastructure Rehabilitation, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Miguel A. Medina, Jr., p748-753

Optimal Long-Term Scheduling of Bridge Deck Replacement and Rehabilitation, TE Mar./Apr. 92, p312-322

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see Pulido, Julio E., (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p507-510

Jacquet-Francillon, N. see Leroy, P., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p566-573

Jacquez, Ricardo B.
Biochemical Control of Sulfide Production in Wastewater
Collection Systems, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), with Hamdy H. ElRayes, p327-333
see Martinez, Benerito S., Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of
Solutions, F. Pierce Linaweaver, ed., 1992), p169174.

Jaeger, Leslie G. see Bakht, Baidar, ST Mar. 90, p603-618 see Bakht, Baidar, ST May 90, p1370-1383 see Bakht, Baidar, ST June 92, p1608-1624 see Bakht, Baidar, (disc), ST Sept. 90, p2361-2373 see Bakht, Baidar, (disc), ST Sept. 90, p2410-2418

Jaffé, Peter R. see Smith, James A., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p186-191

Jahedi, Jamshid
Fabric Related Probabilistic Model for Granular Materials, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p475-478

Jahren, Charles T.
Design Criteria for Ferry Landings, (Ports '92, David Torseth, ed., 1992), with Ralph Jones and Seiichiro Ishii, p493-505

see Jones, N. P., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p63-66 see Jones, N. P., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p288-291

Jain, Deepak
Knowledge Representation With Logic, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), with Kincho H. Law and Helmut Krawinkler, p15-42

Jain, R.

Operational Strategies for Predenitrification Process, with G. Lyberatos, S. A. Svoronos and B. Koopman, EE Jan./Feb. 92, p56-67 see Hamilton, J., EE Jan./Feb. 92, p38-55

Jain, Subhash C. Note on Lag in Bedload Discharge, HY June 92, p904-917

Dynamics of Buildings with V-Shaped Plan, with Utpal K. Mandal, EM June 92, p1093-1112

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James, Carol Ruth see Long, Linda Rae, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p504-509

James, David E. see Souleyrette, Reginald R., (Transportation Flanning and Air Quality, Roger L. Wayson, ed., 1992), p182-194

James, Edwyn see Powell, Richard R., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1494-1498

James, L. Douglas disc. (of Existentialism, Engineering, and Liberal Arts, by David A. Bella, El July 90, p309-321), El July 92, p309-312

James, P. W. see Graham, D. I., HY Sept. 92, p1270-1286

See Glainin, James, R. J. see Barrett, P. R., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p407-422

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Jamiolkowski, Michele

Compaction of Granular Soils—Remarks on Quality Control, Grouing, Soil Improvement and Geosynthei-ics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Erio Pasqualini, p902-914

As, Chyan-Deng
A Sphere Moving Down an Inclined Bumpy Surface, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Hsieh Wen Shen, Chi-Hai Ling and Cheng-lung Chen, p768-771
see Ling, Chi-Hai, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p760-763

see Ling, Chi-Hai, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767

see Ling. Chi-Hai. (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p852

Janakus, Jeffrey

Internal Pressure in a Lunar Inflatable Structure, (Eng neering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2360-2366

nardhanam, R.

Mix Design for Flowable Fly-Ash Backfill Material, with F. Burns and R. D. Peindl, MT Aug. 92, p252-263

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Janberg, K.
The German Cask-Concept for Intermediate and Final
Storage of Spent Fuel, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), with H. Spilker and
R. Hüggenberg, p385-394

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Janoo, Vincent C.

Road and Airport Pavement Response Monitoring Sys-tems, with Robert A. Eaton, ed., 1992, 0-87262-890-6, 435pp.

Jansen, Robert B. disc. (of La Villita Dam Response During Five Earth-quakes Including Permanent Deformation, by Ahmed-Waeii M. Elgamal, Ronald F. Scott, Mohamed F. Suc-carieh and Liping Yan, GT Oct. 90, p1443-1462), GT Apr. 92, p648-650

Jantzen, C. M. see Marra, S. I.

arra, S. L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p917-924

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Jarrett, Peter M.

see Bathurst, Richard J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1213-1224

Jaselskis, Edward J.

Risk Analysis Approach to Selection of Contractor Evalu-ation Method, with Jeffrey S. Russell, CO Dec. 92, p814-821

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p180-184

Stabilization and Fixation Using Soil Mixing. (Grouting. Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Christopher R. Ryan, p1273-1284
see Broomhead, David, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p564-576
see Gazaway, Herff N., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p206-214

Jayko, K.
see Spaulding, M. L., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p157-174
see Spaulding, M. L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175

Jean, Y. C.

see Basham, K. D., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p401-404

Jefferis, Stephan A.
Contaminant-Grout Interaction, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), pl 393-1402

Jenkins, David A. see Tang, Tianxi, EM Jan. 92, p108-124

Jenkins, Lyle M.

Johnster, Lyle M. Global Change: Geoengineering and Space Exploration, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.2072-2081

Jenkins, Scott A.

Tackling Trapped Sediments, with Joseph Wasyl and
David W. Skelly, CE Feb. 92, p61-63

Jenkins, W. M.

Plane Frame Optimum Design Environment Based on Genetic Algorithm, ST Nov. 92, p3103-3112

Jeanings, Marshall Hydraulic Engineering: Saving a Threatened Resource— In Search of Solutions, with Nani G. Bhowmik, ed., 1992, 0-87262-879-5, 1280pp.

Jennings, Marshall E.

see Chang, Howard H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p76-81

Jennings, R. Brad
USGS Urban Stormwater Investigations in the Dallas-Fort Worth, Texas Metroplex, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Tim H. Raines and Lucia G. Colangione, p56-51

Jensen, David W.

Jensea, David W. Measuring Vibration in an Advanced Composite Beam with Localized Internal Fiber-Optic Strain Sensors, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with John M. Cory, Jr., p1273-1285.

Response of Systems with Uncertain Parameters to Sto-chastic Excitation, with W. D. Iwan, EM May 92, p1012-1025

Jensen, Hector TMDS for Vibration Control of Systems with Uncertain Properties, with Mehdi Setareh and Ralf Peek, ST Dec. 92, p3285-3296

Jensen, Jakob Laigsard Modal and Wave Load Identification by ARMA Calibra-tion, with Poul Henning Kirkegaard and Rune Brinck-er, EM June 92, p1268-1273

Jensen, Mikael

Information Convservation and Retrieval—A Nordic Nuclear Safety Research Project, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2202-2206

Jensen, Ole Krull

See Vested, Hans Jacob, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p317-331

Jenter, Harry L.

Jenter, Harry L.
NetCDF: A Public-Domain-Software Solution to Data-Access Problems for Numerical Modelers, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Richard P. Signell, p72-82

Jeong, E. K.

See Nakagawa, M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p644-647

Jeong, Carrett D.
Critical Buckling Load Statistics of an Uncertain Column, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p563-566

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Jerath, Sukhvarsh
Finite Element Large Deflection Analysis of Cylindrical
Shells with Different Types of Cutouts, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), with Steven R. Porter, p912-

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Jewell, R. A.
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disc. (of Kinematical Limit Analysis for Design of Soil-Nailed Structures, by Ilan Juran, George Baudrand, Khalid Farrag and Victor Elias, GT Jan. 90, p54-72) with M. J. Pedley, GT Nov. 91, p1824-1829

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Jia, Yafei

Computational Model Verification Test Case Using Flume Data, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Sam S-Y. Wang, p436-441

see Castro-Montero, A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p612-615

Jiang, Clarence
LASSAP, Stress and Settlement Analysis and Design Program, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with K. Markouizos, K. Loukakis, F. Motamed and C. Burrous, p426-433

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Axisymmetric General Shells and Jointed Shells of Revo-lution, with Issam E. Harik, ST Nov. 92, p3186-3202

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Water-Level Control in Hydropower Plants, with M.
Hanif Chaudhry, EY Dec. 92, p180-193

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Johansen, K.
Preclosure Assessment of the Canadian Nuclear Fuel
Waste Disposal Concept, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with L.
Grondin and S. Naqvi, p481-488

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Johns, Eldon L.

Johns, Edward L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p134-139

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see Morgan, Russell J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p778-790

Johnson, A. B., Jr. see Schneider, K. J., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1159-1165

United States Metrication and the EC 92, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p571-576

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Johnson, B. H.

Modeling Dredged Material Disposed in Open Water,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), with D. N. McComas and D. C. McVan, p1036-1041

W. (Estuarine and Coastal Modeling, Maintaine, Maintaine,

see Kim, K. W., (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p466-475

Johnson, Billy

see Dortch, Mark, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p145-150

Johnson, Billy H.
see Hsieh, Bernard B., (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed.,
Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p720-732
see Nelson, Eric E., (Ports '92, David Torseth, ed., 1992),
p470-479

Johnson, C. P.
Computer Aided Design for Deep Water Offshore Risers,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p243-257

Johnson, C. W. see Wicks, J. M., IR Sept./Oct. 92, p708-723

Johnson, Charles A

see Stone, John R., (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p72-76

Johnson, Charles L.

Mitigation of Adverse Environmental Effects on Lunar-Based Astronomical Instruments, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Kurtis L. Dietz, T. W. Armstrong and B. L. Col-born, p1832-1841

Johnson, Charles N.
The 1984 Major Rehab of the Muskegon Harbor, MI
South Breakwater: An Extreme Example of Misguided
Design of a Stone Structure, (Durability of Stone for
Rubble Mound Breakwaters, Orville T. Magoon, ed.
and William F. Baird, ed., 1992), p238-253
Mitigation of Harbor Caused Shore Erosion with Beach
Nourishment Delayed Mitigation, St. Joseph Harbor,
MI, (Coastal Engineering Practice '92, Steven A.
Hughes, ed., 1992), p137-153

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Johnson, D. L. see Bjorhovde, Reidar, (disc), ST May 90, p1230-1246

Johnson, Daniel L.

Roller Compacted Concrete Tailing Retention Dam, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Nigel A. Skermer and Frank Bergstrom, pl 81-197 see Arnold, Terrence E., (Roller Compacted Concrete III, Kenneth D. Hansen, ed., 1992), p291-307

Johnson, David H., see Wong, Noel C., (Roller Compacted Concrete III, Ken-neth D. Hansen, ed. and Francis G. McLean, ed., 1992), p440-458

Johnson, F. A.
Closed Cycle Ocean Thermal Energy Conversion, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p70-108

Johnson, Frank Pierce Competition Leads to Losing, ME July 90, p258-261 disc: Ravindra M. Srivatava, ME Jan. 92, p97-98

Johnson, Ins see Milhous, Robert T., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p362-367

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Johnson, Kenneth see Owens, Lawrence, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p445-450

Johnson, Kenneth A., Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p834-849

Johnson, L. E. see Hughes, W. C., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12

Johnson, Marc C.
The Application of UNET to a Complex Channel Network, (Hydraulic Engineering: Saving a Threatened Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 148-1153
see Alavian, Vahid, HY Nov. 92, pl 464-1489

Johason, P. A.

Probability of Bridge Failure Due to Pier Scour, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), with B. M. Ayyub, p690-695

Karamouz, ed., 1992), with B. M. Ayyub, postu-osy Johanoa, P. E.
An Analysis of Contingencies for Making Casks Available for Use During the Early Years of Federal Waste Management System Operations, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with D. S. Joy, R. B. Pope, L. B. Shappert, M. W. Wankerl, R. E. Best, F. L. Danese and S. Schmid, p. 1310-1316 see Shappert, L. B., (High Level Radioactive Waste Management Program Committee, 1992), p190-195

Johnson, Paige E.
The Army Aviation Team from a Military Civil Engineer's Perspective, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992),

Johnson, Paul see Cole, Robert E., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1434-

Johnson, Peggy A. Advancing Bridge-Pier Scour Engineering, El Jan. 91, p48-55

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Bild-liting Board Bies Come Familian Liv Oct. 92

Reliability-Based Pier Scour Engineering, HY Oct. 92, p1344-1358

e Jones, J. Sterling, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 100-1105

ohnson, Perry se Brown, Russ T., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p507-513

Johnson, Perry L.
Modification of the Stilling Basin at Arthur R. Bowman Dam, Oregon to Reduce Dissolved Gas Supersaturation, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p311-316

Johnson, Richard

Johnson, Richard
see Helleckson, Brent, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p213-223

n, Stewart W.

Johnson, Stewart W.

Developing Technologies for Lunar-Based Astronomy, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Jack O. Burns, Koon Meng Chua and John P. Wetzel, p1853-1864

Engineering Issues for Early Lunar-Based Telescopes, with Jack O. Burns, Koon Meng Chua and John P. Wetzel, AS July 92, p323-336

see Algul, Ferhat, AS Jan 92, p12-23

see Chua, Koon Meng, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1941-1951

see Chua, Koon Meng, (Engineering, Construction, and

see Chua, Koon Meng, (Engineering Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1952-

Johnson, See A.

A Pilot Sounding Rocket Project Utilizing Student Labor,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p2317-2327

Johnson, Thomas D. see Purcell, Laurence J., CE Aug. 92, p36-37

see Stefan, Heinz G., EE Mar/Apr. 92, p209-225

Joint Task Force of the American Society of Civil Engineers and the Water Environment Federation, (Joseph F. Lagnese, chum.)
Design of Municipal Wastewater Treatment Plants, 2 vols (M&R No. 76), 1991, 0-87262-834-5, 1632pp.

(M&R No. 76), 1991, 0-8720-2-834-5, 1632pp.
Jolly, Stere
Orbital Construction of a NTR Mars Transfer Vehicle,
(Engineering, Construction, and Operations in Space
III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Mike Loucks and George W.
Morgenthaler, p987-992, with Mike Loucks and George W.
Space-Based Assembly Sequence Formulation for Evaluation of Large Orbital Assemblies, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh,
ed., Stein Sture, ed. and Russell J. Miller, ed., 1992),
p1530-1541

nes, Burton H. e Washburn, Libe, HY Jan. 92, p38-58

nes, C. Peter

ues, C. Feter permarket Roof Collapse in Burnaby, British Colum-bia, Canada, with N. D. Nathan, CF Aug. 90, p142-160 disc: Benjamin R. Baer, CF Feb. 92, p67-68 clo: CF Feb. 92, p69-70

see Woldt, W., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p411-416

Dayton L.

see Marsh, Kenneth A., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1935-

Jones, Eric M.

Pressure Suit Requirements for Moon and Mars EVA's, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Harrison H. Schmitt, p1701-

Tones, Gianna M.

The Proposed Waste Management Plan for Dairy Farm Wastes Polluting the Tangipahoa River and Lake Pontchartrain, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p656-661

Jones, J. Sterling

Effects of Footing Location on Bridge Pier Scour, with
Roger T. Kilgore and Mark P. Mistichelli, HY Feb. 92,
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Merging Field & Laboratory Bridge Scour Data, (Hydrau-lic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Peggy A. Johnson and Ar-thur C. Parola, p1100-1105

Jones, Kathleen F.
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Jones, LaDon

Adaptive Control of Ground-Water Hydraulics, WR Jan/Feb. 92, pl-17

Jones, Lindsay R. see Mayes, Ronald L., ST Jan. 92, p284-304

Jones, M. L.

Developing a Functioning Visualization and Analysis System for Performance Assessment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p846-851

Jones, M. P.

Water Mains, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of So-lutions, Mohammad Karamouz, ed., 1992), p764-769

Jones, Morgan
ESCAPE: Small Payload Strategies, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1542-1545

Object Oriented Spacecraft Architecture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2328-2337

see Hanse, Elaine, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1523-1529

s. N. L.

See Lin, H. C., (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p335-340

es, N. P.

Jones, N. P.
Comparison of Wind Cross-Spectral Data with Models, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with A. Jain and R. H. Scanlan, p288-291
Wind Cross-Spectrum Effects on Long-Span Bridges, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. Jain and R. H. Scanlan, p63-66

Jones, Nicholas P. see Shenton, Harry W., III., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p312-315

Joses, Normana L.

Automated Delineation of Catchment Area Boundaries with TINs, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with James Nelson, p347-352 Triangulated Irregular Networks, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with James Nelson, n719-726.

p719-726

esh Generation for Estuarine Flow Modeling, with David R. Richards, WW Nov./Dec. 92, p599-614

David R. Kicharus, www. Theorems. David R. Kicharus, www. Land. Matrix Composites, Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with D. H. Allen and J. G. Boyd, p99-102 see McConnell, P. (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180 see Shappert, L. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1855-1859

ones, Ralph re Jahren, Charles T., (Ports '92, David Torseth, ed., 1992), p493-505

ones, Robert E.
he Bowser, Rita W., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2212-2218

Jones, Russel C. Technical Personnel Shortages in Construction Industry, disc: Richard E. Hall, El Jan. 92, p91 disc: Robert R. McBride, El Jan. 92, p92

see Anayiotos, A. S., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p844-847

Jones, S. M. see Dean, M. H., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2062-2068

Jones, T. E. R. see Graham, D. L. HY Sept. 92, p1270-1286

Jones, W. K.
see Wu, T. S., (Estuarine and Coastal Modeling, Malcolm
L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed.,
1992), p344-356

Jordan, A. J. see Birt, C. S., (Ports '92, David Torseth, ed., 1992), p670-681

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Joseph, I.

Joseph, I.

Phase Stability of Simulated Nuclear Waste Glasses,

(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), with T. V. Palmiter and L. D. Pye,

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Jowitt, Paul W.
Optimal Pump Scheduling in Water-Supply Networks, with George Germanopoulos, WR July/Aug. 92, p406-

see Xu, Chengchao, (disc), HY May 91, p595-614

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see Broadhead, B. L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2182-2189 see Johnson, P. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1310-1316 see Shappert, L. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p190-195

Joynes, S. A. see Borthwick, A. G. L., EE Nov./Dec. 92, p905-922

Ju, J. W. Micromechanics and Effective Properties of Elastic Particulate Composites, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p95-98 see Tseng, K. H., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p361-364

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see Younker, Jean L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p517-524

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ng, Choong-Hwan Choi, Jong-Won, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2278-2283

Junkins, J. Stephen see Forslund, David W., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518

Laboratory Model Study on Geosynthetic Reinforced Soil Retaining Walls, with B. Christopher, GT July 89, p905-926

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Juran, Ilan
Kinematical Limit Analysis for Design of Soil-Nailed
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disc: Dov Leshchinsky, GT May 92, p816-819
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disc. (of Geosynthetic Reinforced Soil Structures, by Dov Leshchinsky and Rajph H. Boedeker, GT Oct. 89, p1459-1478) with Khalid Farrag, GT Oct. 91, p1639-1642

see Borden, Roy H., ed., Grouting, Soil Improvement and Geosynthetics

Justice, Donald R.

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Justus, Philip S.

Introductory Remarks for the International High-Level Radioactive Waste Conference Technical Session on "Site Chracterization: Approaches, Concepts, Con-cerns', (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Jane R. Stockey, p746-747

see Trapp, John S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2039-2046

Kabir, Humayun R. H.

An Analytical Solution to a Clamped Cylindrical Panel with Anti-Symmetric Angle-Ply Laminations, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. B. Kennedy, p1055-

Boundary-Continuous Fourier Solution for Clamped Mindin Plates, with Reaz A. Chaudhuri, EM July 92, p1457-1467

A Shear Locking Free Three-Node Triangular Plate Bending Element for Moderately-Thick and Thin Symmetrically Cross-Ply Laminated Plates, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p552-555

Kabir, Mohammed G.

see Chang, Ching S., GT Dec. 92, p1959-1974 see Chang, Ching S., GT Dec. 92, p1975-1992

Seepage Optimization for Trapezoidal Channel, IR July/ Aug. 92, p520-526

Kadar, Istvan

3D Analyses of Complex Buildings on Micros, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Ricardo A. A. Todeschini, p551-557

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see Rice, Charles E., HY July 91, p929-933

Kaden, Richard A.

Uses for Lunar Crawler Transporters, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p378-389

Kaempen, Charles E.

Unidirected Twined-Strand Composites and Their Uses, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p546-559

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see Yonekura, Ryozo, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p725-736

Kagawa, T. Effects of Liquefaction on Lateral Pile Responses, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p207-223

Kagawa, Tuknaki

Moduli and Damping Factors of Soft Marine Clays, GT Sept. 92, p1360-1375

Kaihatu, James M.

Longshore Sediment Transport Rate at Morro Bay, CA, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Chris Andrassy and Edward F. Thomp-son, p615-631

see Kirby, James T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p71-74

Kajenski, P. see Huston, D., (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p60-69

see Dutta, Piyush K., (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p213-228

Kaliakin, Victor N.

Generalized Isoparametric Coordinate Determination Scheme for Finite Element Mesh Generation, (Engi-neering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p928-931

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Kalkani, E. C.

Ambient Temperature Effect in Concrete Dam Founda-tion Seepage, GT Jan. 92, p1-11

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Kaluza, Michael J. see Doyle, Earl H., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p770-782

Kalyanapuram, Madhasadan V. see Vieux, Baxter E., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p168-173

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Kaman, Vicki S.

Conflict Management Training for Today's Engineering Managers, with James A. McCambridge, ME July 92, p298-305

Kamand, F. Z.
see Dimmitt, A. K., (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p294-299

Engman, ed., 1992), p.294-299
Kamarthi, Sagar V.
A Connectionist Vertical Formwork Selection System, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Victor E. Sanvido and Soundar R. T. Kumara, p.1171-1178
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Coastal Geomorphology and Sand Budgets Applied to Beach Nourishment, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with F. David Stevens, p.29-44

see Nartker, T. A., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2106-2108

Kanamori, Hiroshi see Knudsen, Christian W., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p597-605

Kandalaft-Ladkany, Nadia

RADURIANT-LAGERNY, Nädla Design Management and Stress Analysis of a Circular Rock Tunnel and Emplacement Holes for Storage of Spent Nuclear Fuel, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), with Richard V. Wy-man, p.2260-2266

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Kandhal, Prithri S. see Khatri, Maqdool A., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p317-324

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Kane, Dan
A Context for Understanding the Significance of Radiation Exposures from the MRS, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with Ricardo
Palabrica and Christine Van Lenten, p1938-1945

Kane, J. H.
Boundary-Element Direct Reanalysis for Continuum
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Sture, ed. and Russell J. Miller, ed., 1992), p416-

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Shipping Cask Development Loaded 4 PWR Fuel Assemblies, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. C. Lee and S. G. Ro, p1844-

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Kanuka-Fuchs, Reinhard Green Architecture: Designing an Ecologically Sound Dwelling, (Housing America in the Twenty-First Centu-ry, Mehmet Inan, ed., 1992), p1-10

Kao, Chia Chuen The Effect of Wave Grouping on the Characteristic Wave Height, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p83-86

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NASA's Future Plans for Space Astronomy and Astrophysics, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1789-1797

Kaplan, Paul G.
Uncertainty and Sensitivity Results for Pre-Waste-Emplacement Groundwater Travel Time, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), p1643-1646

Kaplan, Stan
The General Theory of Quantitative Risk Assessment,
(Risk-Based Decision Making in Water Resources V,
Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene
Z. Stakhiv, ed., 1992), p11-39

Kaplan, Stanley D. disc. (of Standard of Care for Delivery of Engineered Products, by James C. Porter, El Apr. 90, p193-201), El Apr. 92, p206-207

Expert System for Wastewater Collection System Infiltra-tion and Inflow Mitigation, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Hany H. Zaghloul and Richard Scholze, p.121-128

see Zaghloul, Hany H., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p145-152

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Karamouz, Mohammad

Optimization and Simulation of Multiple Reservoir Systems, with Mark H. Houck and Jacque W. Delleur, WR Jan./Feb. 92, p71-81

Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, 1992, Threatened Resource-0-87262-876-0, 920pp.

0-8726-247-0-320pp.
see Vasiliadis, Haralambos V., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p561-566
see Vasiliadis, Haralambos V., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p679-684

Karantoni, Fillitsa V.

Computed Versus Observed Seismic Response and Damage of Masonry Buildings, with Michael N. Fardis, ST July 92, p1804-1821

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Karbhari, Vistasp M.

Determination of Interfacial Shear and Normal Stresses in Fiber Pull-Out, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1004-1007

Microcrack Interaction Toughening in Ceramics and CMCs, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1016-1019 see Kukich, Diane S., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p953-967

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Use of Interactive Simulation Environments for Evalua-tion of Water Supply Reliability, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Richard N. Palmer, p144-

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Karshenas, Saced
Application of Neural Networks in Earthmoving Equipment Production Estimating, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with Xin Feng, p841-847

Karunaseas, W. M.
Ultrasonic Wave Scattering by a Crack in a Composite Plate, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. H. Shah and H. D. Mair, p556-559

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Katayama, Hiroshi see Ha, Belinda, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p836-839

Katopodes, Nikolaos D.
Control of Contaminant Transport in Estuaries, (Estuaries and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), p370-381

Kattan, Peter I.

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Katul, Gabriel G. Analysis of Evaporative Flux Data for Various Climates, with Richard H. Cuenca, Philippe Grebet, James L. Wright and William O. Pruitt, IR July/Aug. 92, p601-

Katz, Glenn

Katz, Glean Multimedia in the Civil Engineering Classroom, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p245-252
Using Simulation Software to Build Conceptual Models in Civil Engineering, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p237-244

Katz, Jonathan

see Sprecher, William M., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1559-1564

Katz, Sara M.
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Kauschinger, J. L.
Jet Grouting: State-of-the-Practice, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with E. B. Perry and R. Hankour, p169-181

Kauschinger, L. Joseph
Methods to Estimate Composition of Jet Grout Bodies,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), with Rachid Hankour and E. B. Perry, p194-205

Kausel, Eduardo
Frequency Domain Analysis of Undamped Systems, with
Jose M. Roësset, EM Apr. 92, p721-734
Scattering of Waves by Steel Reinforcement in Concrete,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), with R. Ghibril, p956-959

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Kuvvadas, M. see Gazetas, G., (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93

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Kayyali, O. A. Chloride Binding Capacity in Cement-Fly-Ash Pastes, with M. Sh. Qasrawi, MT Feb. 92, p16-26

Geotechnical Database Manipulation to Effect Stochastic Analysis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p224-227

Ecaton, Jeffrey R.
Landslide Hazard Analysis for Pipeline Design, Northeast Utah, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Robert M. Robison and Jacqueline D. J. Bott, p192-204
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Kedrovsky, O. L.
Prediction of Geological and Mechanical Processes While
Disposing of High-Level Waste (HLW) Into the Earth
Crust, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with V. N. Morozov, p759-762
Technological Parameters of Underground Facilities for
Long-Term Storage of High-Temperature Sources,
(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), with I. Y. Shishchits and V. N. Vorobjev, p2410-2414

Keep Leon M.

Keer, Leon M.

Contact Induced Damage, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p502-505

Kehoe, Robert P.

Advanced Construction Management for Lunar Base Construction—Surface Operation Planner, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1546-1556

Keillor, J. Philip

Construction on Wisconsin's Lake Michigan Coast, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p762-778

Keirouz, Walid T.

Object-Oriented Programming, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p80-103

Keth, Theo G.
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Keller, C. Richard
Trends in Published ITE Trip Generation Rates, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Jay E. Sherin and Michael C. Connor, p32-36

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Kellett, Ronald
Performance Specifications for the Design and Manufacture of Energy Efficient Housing in the 21st Century, (Housing America in the Twenty-First Century, Webmet Inan, ed., 1992), with Mark DeKay, Brook Muller, Donald Peting and G. Z. Brown, p101-110

Kelley, Roy S. Knowledge is Important No Matter Its Source (Itr), CE May 92, p30,32 Know

Kelly, Trevor E. see Mayes, Ronald L., ST Jan. 92, p284-304

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see Stansbury, J., (Risk-Based Decision Making in Water
Resources V, Yacov Y. Haimes, ed., David A.
Moser, ed. and Eugene Z. Stakhiv, ed., 1992),
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Kempe, Marcis Solving MWRA's Supply Issues Through Conservation, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p163–1892.

Kemurdjian, A. L.

The Small Mars Rover, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with V. V. Gromov, p390-397

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Kennedy, Kriss J.

Dust Control Research for SEI, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992), with
Jeffrey R. Harris, p398-407

A Horizontal Inflatable Habitat for SEI, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p135-146

Kennedy, Thomas W.

Kennedy, Thomas W. see Ping, W. Virgil, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p206-215

ent, Steven

Outpost Service and Construction Robot (OSCR), (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1454-1463

erl, Felicia A.

Developing Conceptual Models for Performance Assessment of Waste Management Sites, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1922, with A. Sharif Heger and David P. Gallegos, p502-509

Kerr, Faraum W. disc. (of Critical Elements of Development Impact-Fee Programs, by Arthur C. Nelson, James C. Nicholas and Julian C. Juergensmeyer, UP May 90, p34-47), UP Mar. 92, p42

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Exchange Place Station Subsurface Reconstruction and Improvements, with George J. Tamaro and Daniel M. Hahn, CO Mar. 92, p166-178

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Shielding Design of the Ventilated Storage Cask, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), with John V. Massey and Henry H. Tran, 1992), with p2047-2055

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Use of Interactive Simulation Environments for the Development of Negotiation Tools, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Richard N. Palmer, p68-73

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Water Data of the International Boundary and Water Commission, (Irrigation and Drainage: Saving a Threatened Resource—In Search (5 Solutions, Ted Engman, ed., 1992), with Kenneth N. Rakestraw, p584-589

Keyhani, M.

Convective Heat Transfer in Spent Fuel Canisters, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), with F. A. Kulacki, p773-778

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Khalfallah, Majed
A GIS for Land Management, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Salah Benabdallah, Naceur Chemam and Rached M'Hadbi, p929-933

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Trends in Streamflow Due to Wetland Drainage, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Misganaw Demissie, p476-481

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Khan, Mohammad Shamim Rebar Corrosion in MgSO<sub>4</sub> Solution, with Abdul-Hamid J. Al-Tayyib, MT Aug. 92, p292-299

Khan, Nazrul I.

Skin Friction Distributions on Piles in Sand, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with John S. Templeton, III. and Michael W. O'Neill, p783-797

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see Paulson, Boyd C., Jr., (Computing in Civil Engineer-ing and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p348-355

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Learning Rules for Driving Scenarios for an Urban Rail Corridor with Closely Spaced Stations, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with T. Arciszewski and S. Khurshidul Hoda, p983-990

Khater, M.

See Rojahn, C., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p87-101

Khatri, Maqbool A.

Investigating Hot Mix Asphalt Segregation Causes and Cures: A Knowledge-Based Systems Approach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Sivand Lakmazaheri, E. Ray Brown and Prithvi S. Kandhal, p317-324

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Khisty, C. J.

Reflection in Problem Solving and Design, with L. L. Khisty, El July 92, p234-239

Khisty, C. Jotin

disc. (of Life-Cycle Considerations in Urban Infrastruc-ture Engineering, by David Novick, ME Apr. 90, p186-196), ME Jan. 92, p83

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Khogali, Walaa E. I.

Anogali, Walsa E. I.
Installation and Monitoring of Thermal Conductivity Suction Sensors in a Fine-Grained Subgrade Soil Subjected to Seasonal Frost, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Kenneth O. Anderson, Julian K. Gan and Delwyn G. Fredlund, p153-

Khondker, Sufian A.

Geomorphic and Hydraulic Factors Affecting Stream Stability at New York Thruway Bridges, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Keith E. Giles, Carl J. Montana and Mark A. Hixson, p912-918

Model Study to Determine the Wave Forces Acting on the St. Lucie Velocity Caps, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Tatsuaki Nakato, H. Roger Gavankar and Rudy D. Gil, p249-256

Khoo, H. A. Constitutive Model for Ice, with T. M. Hrudey, EM Feb. 92, p259-279

Skibler, David F.

Task Committee Report on Urban Hydrology Chapter, Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with A. Osman Akan, Christopher B. Burke, Mark W. Glidden, Gert Aron, Richard H. McCuen and Andrew J. Reese, p725-728

see Reed, Joseph R., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p931-933

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Fatigue Strength of Welded Joints Under Broadband Loadings, (Probabilissic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Shahram Sarkani and James A. Kuny, p428-431

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Kilpatrick, B. L.
Use of Cement-Bentonite for Cutoff Wall Construction,
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Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), with S. J. Garner, p803-815

Kim, Byung J. see Trani, Antonio A., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24

Kim, C. D. see Bert, C. W., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p652-655

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see Kim, Robert H., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p786-793

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Numerical Simulation of Tidally Induced Three-Dimensional Hydrodynamics of New York Bight, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with N. W. Scheffner, D. J. Mark and B. H. Johnson, p466-475

Kim, Keu W.
Computation of Long-Term Three-Dimensional Hydrodynamics of New York Bight, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with David J. Mark, Norman W. Scheffner and Lynn M. Bocamazo, p500

Kim, Kwang W.

Performance of Crushed Waste Concrete as Aggregate in Structural Concrete, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Bong H. Lee, Je-Seon Park and Young S. Doh, p.332-343

Kim, Moo-Hyun

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(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p158-172

Kim, Moonja P., see Diekmann, James E., CO June 92, p399-411 see Eicheverry. Diego, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p833-840

1992), p833-840

Kim, Robert H.

Low-Cost Computer Techniques for Steel Truss Bridge Rehabilitation and Ratings, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Jai B. Kim, p786-793

Structural Performance of Hardwood-Metal Composite Beams, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Jai B. Kim, p718-731

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Kim, Seong H.

A GIS-Based Regional Risk Approach for Bridges Subjected to Earthquakes, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Michael P. Gaus, George Lee and K. C. Chang, p460-467

see Shinozuka, Masanobu, (Lifeline Earthquake Engi-neering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p102-109

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Kim, Y. H. Flow Dynamics in an End-to-End Vascular Graft Junc-tion, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with K. B. Chandran, p964-967

Kim, Yoe-Gon Flow Visualization of Lid-Driven Cylindrical Cavity Flow, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Ching-Jen Chen, p393-396

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King, Ginger P.
Education: Gateway to the Solution, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p4-10

Waste Management Program Committee, 1992), ps-10
Evaluation of Modelling Parameters for Simulation of Estuarial Systems, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p707-719
See Roig, Lisa C., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p268-279

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Design and Construction of a Bonded Fiber Concrete
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1992), with William H. Temple and Steven L. Cumbaa,
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Kiousis, Panos D. Associative Plasticity for Dilatant Soils, with Ali A. Abdulla, EM Apr. 92, p763-785

dulla, EM Apr. 92, p763-785

Kirby, James T.

Shealing and Breaking of Random Wave Trains: Spectral Approaches, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with James M. Kaihatu and Hajime Mase, p71-74

Wavelet Transform Analysis of Several Transient or Nonstationary Phenomena in Engineering Mechanics, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Michael J. Chajes and Jeffrey A. Melby, p204-207
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Kirpich, Phillip Z.

Holistic Approach to Irrigation Management in Develop-ing Countries, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), p263-268

man, ed., 1992), p203-208
disc. (of Problems and Potential of Irrigated Agriculture
in Sub-Saharan Africa, by Mahmood Alam, IR Mar./
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Minimum Weight Design of Structural Topologies, with B. H. V. Topping, ST July 92, p1770-1785

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Extended Experience with a Short-Term Hydropower Scheduling Model in New England, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p299-304

disc. (of Load Transfer for Pipe Piles in Highly Pressured Dense Sand, by Michael W. O'Neill and Richard D. Raines, GT Aug. 91, p1208-1226) with Morimichi Uesugi, GT Sept. 92, p1485-1486

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Kjartanson, B. H. Use of a Method Specification For In Situ Compaction of Clay-Based Barrier Materials, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with N. A. Chandler, A. W. L. Wan, C. L. Kohle and P. J. Roach, p1129-1136

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see Thompson, P. M., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1082-1089
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see Gianoulakis, S. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p805-812

Klein, Dennis H.

Geographic Information Systems—Evolutionizing the Decision Making Process, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1204-1211

ISY21, D1604-1211
Kleia, Stephen J.
Slope Stabilization at the Forks of Butte Project, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with David K. Hughes, p905-922
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An Experimental Model Using a Graphical User Interface, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Bryan R. Pearce, p36-47

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disc. (of Tort Reform and Design Professional, by Dennis R. Schapker, El July 90, p258-265), El July 92, p317

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Recent Criteria for Design of Groins, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Drew C. Baird, p.828-833

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Effectiveness of Implemented HOV Lane System, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p85-89

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Recent Developments of the Carbotek Process for Production of Lunar Oxygen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Michael A. Gibson, David J. Brunenman, Seishi Suzuki, Tetsuji Yoshida and Hiroshi Kanamori, p597-605

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Electronic Spreadsheets in Structural Design, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1187-1194

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Kobayashi, A.
Numerical Modeling of Flow and Transport Phenomena
in a Fractured Rock and its Calibration Process, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), with R. Yamashita and Y. Moro, p695-703

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Trip Generation Rates, a Historical Look, (Site Impact
Traffic Assessment: Problems and Solutions, Robert E.
Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria,
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Stochastic Simulation of Climate Input for Water Supply Forecasting, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 9575-562

Kodama, Toshio

Open Boundary Condition for Multiple Level FE Tidal

Current Flow Analysis, (Hydraulic Engineering: Saving

a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992),

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Problems and Solutions, Robert E. Paaswell, ed.,
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Experimental Study of Underground Exploration by
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The Assessment of Armourstone for Shoreline Protection, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), with R. B. Watts, p82-94

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Concreting at Subfreezing Temperatures, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Edel R. Cortez and Brian A. Charest, p382-397

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Three Case Histories of Waste Stabilization, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with David S. Martin and Alan R. Ringen, pl 261-1272

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Integrated Performance Assessment Model for Waste
Package Behavior and Radionuclide Release, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), with Ian Miller and Mark Cunnane, p1786-1793
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see Smailos, E., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1676-1680

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Koussis, Antonis D.

Modeling DO Conditions in Streams with Dispersion, with Prashant Kokitkar and Adosh Mehta, EE May/June 90, 661-614

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Kouwen, N. Modern Approach to Design of Grassed Channels, IR Sept./Oct. 92, p733-743

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Kramer, Strven L. Analysis of Membrane Penetration in Triaxial Test, with N. Sivaneswaran and R. O. Davis, EM Apr. 90, p773-789

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Danish Road Testing Machine, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p96-111

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Kraus, D. D.

Acration Using the Howell-Bunger Valve, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with E. R. Hixson, p299-304

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see Amein, Michael, (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed.,
Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p644-656

Swanson, ed., 1992, po4-0-05
Krauthammer, T.
Numerical Simulation of Dynamic Shear Transfer, (Non-destructive Testing of Concrete Elements and Structures, Farhad Ansart, ed. and Stein Sture, ed., 1992), with A. Koubaa, p139-149
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Krejsa, P.

Krejasa, P. Experience With an Educational Package on Radioactive Waste Management in a Country Having no Nuclear Power Programme, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with G. Ehrenstrasser, p1491-1493

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Kriebel, David L.

Nonlinear Wave Runup on Large Circular Cylinders, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p173-187

Krippachue, Robert C. Vertical Business Integration Strategies for Construction, with Bob G. McCullouch and Jorge A. Vanegas, ME Apr. 92, p153-166

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Effluent Nitrite Accumulation in the Heterotrophic Deni-trification of High-Strength Industrial Wastewaters, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with William W. Clarkson, p370-375

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Kritzler, Robert W.

Probabilistic Evaluation of Redundancy of Bridge Structures, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Jamshid Mohammadi, p156-159

Krivokhatsiy, A. S.

see Anderson, E. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2114-2121

Krizek, Raymond J.

Anisotropic Behavior of Cement-Grouted Sand, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Maan Helal, p541-550

Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), with Dominique F. Michel, Maan Helal and Roy H. Borden, p712-724

Mechanical Properties of Microfine Cement/Sodium Sili-cate Grouted Sand, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Hung-Jiun Liao and Roy H. Borden, p688-699

Roy H. Borden, p688-699
see Helal, Maan, Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p526-540
see Liao, Hung-Jiun, Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p576-687
see Schwarz, Lois G., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p512-525
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Holtz, ed. and Ilan Juran, ed., 1992), p1403-1419

Aruna, Joachim Passive Dispersive Transport Modelling: Comparison with Experimental Rhodamine Data in the Elbe Estudy, Germany, (Estudine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p127-139

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see Sørensen, J. D., (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p523-526

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aruse, E. Gordon disc. (of Rating Correction for Lateral Settlement of Parshall Flumes, by Steven R. Abt and Kenneth J. Staker, IR Nov/Dec. 90, p797-803), IR Mar./Apr. 92, p337-339

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In Situ Recovery of Water from Dormant Comet Cores & CI Carbonaccous Chondrites, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2367-2381

see Gillett, Stephen L., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1048-1057

Kaesel, Thomas R.
Overview of Design and Construction in the Urban Environment, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p1-5

Kuhale, Roger A.

Loop Rating Curves from Goodwin Creek, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Andrew J. Bowie, p741-746
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Kukich, Diane S.

Russien, Drame S.
Composites for Offshore Applications: A Multidisciplinary Education Program for the Marine Industry, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Vistasp M. Karbhari and John W. Gillespie, Jr., p953-967

Kukreti, Anant R.
Dynamic Analysis of Rigid Airport Pavements with Discontinuities, with Mohammad R. Taheri and Ragnar
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Kulak, Geoffrey L. disc. (of Fatigue Strength of Riveted Bridge Members, by John W. Fisher, Ben T. Yen and Dayi Wang, ST Nov. 90, p2968-2981), ST Aug. 92, p2280-2281

Kulatilake, P. H. S. W.

Joint Network Modeling and Scale Effects in Rock, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Shuxin Wang and Hasan Ucpirti, p441-444

Kulchak, Ronald D.

Proper and Improper Use of Specifications, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p311-315

Kulcinski, G. L.

Ruicinaux, G. L. Environmental Aspects of Lunar Helium-3 Mining, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with E. N. Cameron, W. D. Carrier, III. and H. H. (Jack) Schmitt, p606-616

see Schmitt, H. H., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-1170

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On the Evaluation of Static Soil Properties, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p95-115

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Kumar, Viswanath K.
Gate Maritime Wharf and Intermodal Facility, (Ports '92, David Torseth, ed., 1992), with William L. Allen and Thomas A. Mantia, p43-57

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see Kamarthi, Sagar V., (Computing in Civil Engineering
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1992), p1171-1178
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see Raj, Kanwar, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p899-903

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Kung, C. J.

Fatigue/Fracture Reliability and Maintainability of Struc-tural Systems: A Method of Analysis, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with P. H. Wirsching, p436-439

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Chemical-Constituent Load Removal Efficiency of an Urban Detention Pond/Wetlands System in the Denver Metropolitan Area, Colorado, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Timothy D. Steele, Ben Urbonas and Jay Carlson, p352-357

Kunnath, Sashi K.

see Lobo, Roy F., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p905-912

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Kuo, S. S.
Development of Computer Automated Bridge Inspection Process, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Thomas E. Davidson and Leonard M. Fiji, p794-801 see Woodard, M. J., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p409-412

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Kuprens, John A.

An Optimization Methodology for Crew Assignment
Based on Maximizing Labor Productivity. (Computing
in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R.
Wright, ed., 1992), with Anthony D. Songer, p182-189

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Management, High Level Radioactive Waste Management Program Committee, 1992), p2249-2254

Kurnosov, V. A.

Some Aspects Concerning the Design of High Level
Waste Vitrification and Storage Facilities, (High Level
Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),
with M. V. Strakhov, V. T. Sorokin and A. E. Kozlov,
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Kurt, Carl E.

A Comparison of Geographical Information Systems, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Khurshid Mohyuddin and Bo Guo, p17-24

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Civil Engineering Construction, (Utilization of Waste
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Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p32-

Kytomas, Harri K.
Harmonic Excitation of an Unconstrained Saturated Particle Bed, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Charles C. Abnet, p640-643

La Breche, Carol L.
Case History: TRE At a Refinery/Chemical Plant, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Russell S. Dykes, p555-560

La Fosse, Ulrich

Densification of Loose Sands by Deep Blasting, (Grouling, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Theodore von Rosenvinge, IV, p954-968

La Mendola, Lidia Large-Displacement Effects on Dynamic Response of Ec-centric Buildings, with Maurizio Papia, EM May 91, p954-973

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La Penta, Bruce A.

Tunnel Seepage Control by the Interior Grouting Method, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Reuben H. Karol and Charles H. Arnold, p436-448

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Estimating Damage and its Influence on Fracture Toughness, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with L. Biolzi and C. N. Chen, p523-526

see Shah, K., (Engineering Mechanics, Loren D. Lutes, ed. 601, pp. 1986-601, pp. 1986-60

ah, K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p498-501

Lackowitz, George W.
Acquisition Issues, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p1031-1035

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and Ross W. Boulanger, ed., 1992), p1071-1111

Ladd, Richard S.

utt, Rathindra N., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p546-559

see Stauffer, Peter A., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403

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Instability of Slopes with Nonassociated Flow, (Engineering Mechanicz, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p.288-291
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see Yamamuro, Jerry A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p729-732

Ladeveze, P.
Basic Aspects of Damage Mesomodelling, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with O. Allix, p373-376

Ladkany, Samaan G.
Critical Stresses in Pintle, Weldment and Top Head of
Nuclear Waste Container, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with Brett R.
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Parallelization of Linear Finite Element Analysis, (Com-puting in Civil Engineering and Geographic Informa-tion Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Hsin-Chu Chen, p655-662

see Chang, K. C., ST July 92, p1955-1973

Lai, Wenje
Testing an Expert System for the Activated Sludge Process, (Knowledge Acquisition in Civil Engineering,
Tomasz Arciszewski, ed. and Lewis A. Rossman, ed.,
1992), with P. M. Berthouex, p124-146

Lai, William

see Farran, Hany J., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p687-694

Lai, Yew Chin

Dynamic Response of Beams on Elastic Foundation, with Bing Yuan Ting, Woon-Sung Lee and Bryan R. Becker, ST Mar. 92, p853-858

Lake, William H.

A Comparison of a New Generation of Spent Fuel Cask Designs with Current Cask Design Characteristics, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1839-1843

Impacts of Transportation Regulations on Spent Fuel and High Level Waste Cask Design, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

p201-203

Sequential Versus Distributed Constraint-Based Ap-Sequential Versus Distributed Constraint-Based Approach to Structural Design Automation: A Comparative Study, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p261-268 see Khatri, Maqbool A., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p317-324

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be, T. William

Lambe, 1. William Stability Analysis of an Earth Slope, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Fran-cisco Silva-Tulla, p27-69

Lambert, James H.

Remediation Site Prioritization by the Risk Ranking and Filtering Method, Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), with Con Way Ling and Yacov Y. Haimes, p311-321

Lambert, Jim

Session Report—Natural and Man-Made Hazards and Risk of Extreme Events, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p358-359

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Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p21882195

Landers, Mark N.

Bridge Scour Data Management, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.1094-1099

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Landin, Mary C.
An Overview: Wetland Restoration, Protection, and Establishment by Beneficially Using Dredged Material, (Water Resources Hanning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Thomas R. Patin and Hollis H. Allen, pl 14-118

Hollis H. Allen, pl 14-118
Wetland Restoration and Creation Guidelines for Mitigation, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), with E. A. Dardeau, Jr. and Jerry L. Miller, p439-444
see Davis, Jack E. (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p350-355

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see Howland, Jonathan D., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1216-1231

Alkaii-Silica Reactivity: An Overview of a Concrete Durabity Problem, (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p231-244

Yakowitz, D. S., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p188-193

Lane, Leonard J. see Weltz, Mark A., IR Sept./Oct. 92, p776-790

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Lang, Dennis D.
Clean-Up of Contaminated Soils: A Necessary First Step in Industrial Land Redevelopment, (Ports '92, David Torseth, ed., 1992), p301-315

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Lange, F.
Safety Analysis for Waste Transports to the Planned Final
Waste Repository KONRAD, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with D.
Gründler and G. Schwarz, p421-426

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Earthquakes: A New Look at Cracked Masonry, CE Nov. 92, p56-58

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See Mushtag, M. 2010, H3 Mar. 92, p420-441 see Mushtag, Hasan, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p305-309

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Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Safety and Service Life of Equipment Designed for Cold Climate Operation, CR Sept. 92, p111-123

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Larrade, J. Feasibility of FRP Molded Grating-Concrete Composites for One-Way Slab Systems, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p645-654
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Strategic Planning for Transportation Under the NWPA:

A State Perspective, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Jim Miernyk, p1730-1736

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F. Pierce Linaweaver, ed., 1992), p24-29

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Latham, John-Faul
In-Service Durability Evaluation of Armourstone, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p6-18 see Wang. Huanjin, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p200-210

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Laupahochoe Harbor Planning, Design, & Construction,
(Coastal Engineering Fractice '92, Steven A. Hughes, ed., 1992), p320-336

Lau, K.-C.

see Wan, A. W. L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1122-1128

see Baboock, Roger W., Jr., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p468-473

Laner, H. V., Jr.

Mars Containers: Dust on Teflon Sealing Surfaces, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with J. H. Allton, p508-517

see Rosenfeld, Yehiel, CO Mar. 92, p17-33

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see Sutter, Thomas R., (Engineering, Construction, and
Operations in Space III, Willy Z. Sadeh, ed., Stein
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see Gauthier, John H., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p891-898

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disc. (of Advancing Bridge-Pier Scour Engineering, by Peggy A. Johnson, El Jan. 91, p48-55), El Apr. 92, p216-218

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disc. (of Pipe Plunge Pool Energy Dissipator, by Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323), HY Oct. 92, p1448-1449

disc. (of Resistance in Flat-Bed Sediment-Laden Flows, by D. A. Lyn, HY Jan. 91, p94-114), HY Apr. 92, p662-663

disc. (of Sediment Management with Submerged Vanes. II: Applications, by A. Jacob Odgaard and Yalin Wang, HY Mar. 91, p284-302), HY May 92, p827-828

Launhey, Louis M. disc. (of Ph.D. Roadblocks for Experienced Engineers, by Bruce E. Marsh, El Jan. 90, p56-60) with Osama J. Al-kayyali, El Apr. 92, p200-201

Lavallée, J. G.

Stability of the Olga C Test Embankment, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with G. St-Arnaud, R. Gervais and Y. Hammamji, p1006-1021

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see Jain, Deepak, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p15-42

see Yabuki, Nobuyoshi, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p97-104

Lawe, Stephen
Network Model Analysis of Traffic Patterns Resulting
from a Proposed Regional Mall, (Site Impact Traffic
Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed.
1992), with Norman Marshall and Peter Ryner, p89-93

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see Millet, Richard A., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1365-1381

Lawver, Renée A.

Lawver, Resec A.

Planning Centralized Materials Recovery Facilities, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Jay R. Lund, p537-542

Laymon, Charles A.
Piot-scale Field Experiment of Surface Hydrologic Processes with EOS Implications, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Emir J. Macari and Nicholas C. Costes, p2082-2093

Lea, sees Environmental Monitoring Plan for a Pilot Study Using Phosphogypsum as a Roadbed Material, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Adam Faschan and Marty Tittlebaum, p128-139

Leach, Loren W.
see Tripp, Sandra L., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p12-17

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see Abdel-Ghaffar, A. M., (Nondestructive Testing of Con-crete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p37-48

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Preliminary Design for NATM Tunnel Support in Soil, with G. Wayne Clough, GT Apr. 92, p558-575

Lechner, J. A.

Estimates of Extreme Wind Distribution Tails, (Probablistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with S. D. Leigh and E. Simiu, p276-279

see Swift, M. Robinson, WW Nov./Dec. 92, p587-598

LeCompte, Malcolm A.

Mars Mission Designs: Comparing the Near Term Options, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Julie P. Stets, p726-738

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Floods in Bangladesh, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p971-

see Kim, Kwang W., (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343

Lee, Byoung Ho
Optimal Locations of Monitoring Stations in Water Distribution System, with Rolf A. Deininger, EE Jan./Feb. 92, p4-16

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see Choi, Jong-Won, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2278-2283

Yun, C.-B., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p212-215

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Lee, Chi-Yuan Model for Biological Reactors Having Suspended and At-tached Growths, EE Nov./Dec. 92, p982-987

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Evaluation of Failure Potential in Mudstone Slopes Using Fuzzy Sets, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with C. Hsein Juang, p1137-

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Lee, Eun-Taik

Locally Buckled Plastic Hinge Behavior Under Monotonic and Cyclic Loading Condition, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with G. C. Lee, p1047-1050

see Elkordy, M. F., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1066-1073

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Lee, Gordon K. F.
On-Orbit Assembly of Large Space Structures: A Mars Aerobrake Mock-up Study, (Engineering, Construction, and Operations in Space III, Willy 2. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Dave Anderson, Lisa Rockoff, John Garvey and Juri Filatovs, p999-1009

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Lee, Han-Lia Performance Evaluation of Lake Shelbyville by Stochas-tic Dynamic Programming, with Jon C. Liebman and E. Downey Brill, Jr., WR Mar./Apr. 92, p185-204

Yun, C.-B., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p212-215

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Use of a Geographic Information System for the Highway Design Review Process, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p153-160

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see Tang, C. J., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p220-223

Lee, J. S. Micromechanical Simulation of Wave Propagation in Dense Granular Assemblies, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with M. Y. Ma and A. B. Huang, p417-420

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see Chung, J. Y., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1966-1971

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Lee, Seung W.
Improved Resilient Modulus Realized with Waste Product Mixtures, (Grouting, Soil Improvement and Geoynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with K. L. Fishman, p1356-1367

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disc. (of Estimation of Subgrade Resilient Modulus from
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Lee, X. Constitutive Modeling for Material with Perfect Disordered Heterogeneity, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with C. S. Chang, p445-448

Lee, Xlaogoog Characterization of Granular Material Composite Struc-tures Using Computerized Tomography, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with William C. Dass and Charles W. Manzione, p268-271

Lee, Yong W.

Nitrate Risk Management under Uncertainty, with
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Leech, James R. Riprap Stability Under Impinging Flow, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p138

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Stabilized Active Clay by Sand Admixture, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ian Juran, ed., 1992), with Maen M. Shaar and Phil V. Compton, p1042-1053

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Swanson, ed., 1992), p771-782

Lefebvre, Guy Field Performance and Analysis of Steep Riprap, with Karol Rohan, Mahrez Ben Belfadhel and Oscar Dascal, GT Sept. 92, p1431-1448

Systolic Anterior Motion of the Mitral Valve: In Vitro Flow Studies, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Shengqiu He, Robert A. Levine and Ajit P. Yoganathan, p701-704

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éger, Pierre eismic-Energy Dissipation in MDOF Structures, with Serge Dussault, ST May 92, p1251-1269

Legs. S. A. Robotics for Radioactive Waste Management in AEA Technology Facilities, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. Staples and C. J. H. Watson, p980-984

Lehman, Linda L.

Alternate Conceptual Model of Ground Water Flow at
Yucca Mountain, (High Level Radioactive Waste Management, High Level Radioactive Waste Management
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The Talbert Channel Ocean Outlet Project, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Kenneth E. Smith and Ruh-Ming Li, p745-761

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Leitman, Steve
The Changing Alliance Between Navigational and Environmental Interests in the ACF Basin, (Water Resources Planning and Management: Sauring a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Andrew Dzurik, p407-412

LeMenager, Paul A.

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Concrete-Faced RCC Dams, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p308-322

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see Garisto, N. C., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2284-2289

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3-D Effects of Incipient Fluidization of Fine Sands in Unbounded Domains, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with William MacNair, Richard N. Weisman and Jeffrey Lindley, p654-659
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Progressive Integration of the Personal Computer Into an Undergraduate Civil Engineering Curriculum, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Terry D. Hand, p65-72

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ard, Richard C.

Crane Rebuilding vs. New Purchase, (Ports '92, David Torseth, ed., 1992), p737-748

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disc. (of Necessary Redundancy in Geotechnical Engineering, by Jon O. Osterberg, GT Nov. 89, p1511-1531) with J. D. Frost, GT Feb. 92, p331-333

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Leong, Linda Rae
Pilot Study to Meet Drinking Water Regulations, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Patti P. Craddock and Carol Ruth James, p504-509

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HLW Immobilization in Glass: Industrial Operation and Product Quality, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with N. Jacquet-Francillon and S. Runge, p566-573

eshchinsky, Dov

Lesnemasy, Down
Comparison of Rigorous Slope Stability Methods: Statical Aspects, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1070
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see Stuart, Ivan, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1231-1235

Leu, Rong-Jin
see Yen, Chen-yu, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p104-109

see Boudreau, Russell H., (Ports '92, David Torseth, ed., 1992), p248-262 see Walker, James R., (Ports '92, David Torseth, ed., 1992), p868-883

Leung, Christopher K. Y.
Effect of Micro-parameters on the Macroscopic Behaviour of Ductile Fiber Reinforced Britlet Matrix Composites, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Jeffrey Chi, p744-747

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Leutheusser, H. J. Shear Flow Between Walls in Relative Motion, (Engineer-ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p608-611

Leutheusser, Los., 1972), pool-off Leutheusser, Hans J. Drownproofing of Low Overflow Structures, with Warren M. Birk, HY Feb. 91, p205-213 disc: Rollin H. Hotchkiss and Max Comstock, HY Nov. 92, p1586-1589 clo: HY Nov. 92, p1589

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Evaluation of Ozone Disinfection Systems: Characteristic Time T, with S. Regli, EE Mar/Apr. 92, p268-285 Evaluation of Ozone Disinfection Systems: Characteristic Concentration C, with S. Regli, EE July/Aug. 92, p477-494

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Robert T. Hudspeth, ed., 1992), p114-128

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Levine, Robert A.

see Lefebvre, Xavier P., (Engineering Mechanics, Loren
D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
p701-704

Levinson, Herbert S.

Access Management.—Myth or Reality, (Site Impact Traffic Assessment: Problems and Solutions, Robert E.

Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Frank J. Koepke, p62-66

Levitt, R. E.

Levitt, R. E. see Tommelein, I. D., CO Sept. 92, p594-611 see Tommelein, I. D., CO Dec. 92, p749-766

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Debonding of a Inhomogeneity from a Plastic Matrix,

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Geographic Information Systems Symposium,
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1992), p566-573
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Levandowski, Laurand H.
Forensic Analysis of a Two-Component Joint Sealant
Using FTIR-ATR, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White,
ed., 1992), with Larry N. Lynch and Rogers Graham,
p53-65.

p33-63 Physicochemical and Rheological Properties of Micro-wave Recyled Asphalt Binders, (Materials: Perform-ance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Rogers Graham and Jim Shoenberger, p449-461

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Levis, Carrie M. Light-Scatter Particle Counting: Improving Filtered-Water Quality, with David H. Manz, EE Mar./Apr. 91, p209-223 EE Mar./Apr. 92, p304

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Jury Verdict: Frequency versus Risk-Based Culvert Design, WR Mar./Apr. 92, p166-184

Loss of Ground During CFA Pile Installation in Inner Urban Areas, with Melvin I. Esrig and Robert G. Gaibrois, GT June 92, p947-950

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Li, C. Q. Reliability Analysis of Creep and Shrinkage Effects, with R. E. Melchers, ST Sept. 92, p2323-2337

Li, Chun-Ching Optimal Discretization of Random Fields for SFEM, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), with A. Der Ki-ureghian, p29-32

Li, Duan
Optimal Flood Warning Threshold: A Case Study in Connellsville, Pennsylvania, (Risk-Based Decision Making
in Water Resources V, Yacov Y. Haimes, ed., David A.
Moser, ed. and Eugene Z. Stakhiv, ed., 1992), with
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see Issa, M. A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p260-263

The Remote Monitoring of Waste Glass Melter Product, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with A. Schneider, p533-540

Elastic Solutions for Arbitrarily Shaped Foundations, GT June 92, p938-942

June 92, p938-942
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disc. (of Slope Stability Analysis: Generalized Approach, by Dov Leshchinsky, GT May 90, p851-867), GT Feb. 92, p355-357

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Behavior of Externally Confined Concrete Columns, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with H. Saadatmanesh and M. R. Ehsani, p677-690

Li, Qi see Xue, Zhihuai, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p376-381

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Li, Shu-Guang Stochastic Theory for Irregular Stream Modeling, Part I: Flow Resistance, with Lakshmi Venkataraman and Dennis McLaughlin, HY Aug. 92, p1079-1090

Li, Victor C.

Micromechanics Based Design for Pseudo Strain-Hardening in Cementitious Composites, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with H. C. Wu, p740-743

Optimization of Discontinuous Fiber Composites, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with M. Maalej and T. Hashida, p1000-1003

da, p1000-1003
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Li, Wei-Du

Prequency Spectrum Analysis of Ultrasonic Testing Sig-nal in Concrete, (Nondestructive Testing of Concrete El-ements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p104-114

Li, Wenlung A Coordinate Reduction Technique With Mass Correction for Dynamic Analysis of Structural Systems, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p61-64

see Mantz, Peter A., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p840-845

Anatomy of the Loma Prieta Earthquake Records of Two Steel Buildings Using MIMO System Identification, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with S. T. Mau, p689-692

Elastic Stability of Composite Column, EM Nov. 92, p2320-2327

Li, Yisheng

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see Kareem, Ahsan, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p284-287

reem, Ahsan, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p890-905

Li, Yuan N. Stability Theory of Cohesive Crack Model, with Robert Y. Liang, EM Mar. 92, p587-603

see Lieber, B. B., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p848-851

p848-851 see Shah, S. P., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p852-855 see Yang, J. N., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p828-831 see Yang, J. N., EM July 92, p1423-1440 see Yang, J. N., EM July 92, p1441-1456 see Yang, J. N., EM Muy 92, p1612-1630 see Yang, J. N., EM Nov. 92, p2227-2245

See Tang, J. T., Lian, Q. X., The Transverse Vortex in the Wall Regions of the Turbulent Boundary Layers in the Flows with Adverse Pressure Gradient, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with T. C. Su, p474-477
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Liang, Robert Y.

Anisotropic Hardening Plasticity Model for Sands, with Hann-Ling Shaw, GT June 91, p913-933 disc: Jian Chu, GT Sept. 92, p1478-1480 clo: GT Sept. 92, p1480
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see Li, Yuan N., EM Mar. 92, p.587-603

Linng, Z. see Tong, M., EM Apr. 92, p663-682

Liao, Hung-Jiun
Microfine Cement/Sodium Silicate Grout, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Roy H. Borden and Raymond J. Krizek, p676-687 see Krizek, Raymond J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p688-699

disc. (of Design of Wave Barriers for Reduction of Horizontal Ground Vibration, by Tahmeed M. Al-Hussaini and Shahid Ahmad, GT Apr. 91, p616-636), GT Aug. 92, p1280-1282

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Jeber, B. B.

John in a Model Symmetric Bifurcation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Y. Zhao and J. H. Citriniti, p840-843

Lumped Parameter Model for the Dynamics of the Pul-monary Circulation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Z. Li and B. J. B. Grant, p848-851

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Liebmana, George W. A Proposed Revised State Zoning Enabling Act, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p91-100

Lienhart, David A.
Laboratory Testing of Stone for Rubble Mound Break-waters: An Evaluation, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and Wil-liam F. Baird, ed., 1992), p19-33

Liew, K. M. Elastic Buckling of Rectangular Plates with Curved Inter-nal Supports, with C. M. Wang, ST June 92, p1480-1493

Response of Plates of Arbitrary Shape Subject to Static Loading, EM Sept. 92, p1783-1794 see Wang, C. M., EM Apr. 92, p651-662

Liggett, James A.
What Makes a Quality Paper?, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), p8-12
see Pudar, Ranko S., HY July 92, p1031-1046

Lillevang, Omar J.
Coastal Engineering—The Past!, The Present!, The Future?, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1-11

Lillycrop, Linda S.
Numerical Modeling of Proposed Kawaihae Harbor, HI,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), with Stanley J. Boc., p412-424
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Steven A. Hughes, ed., 1992), p387-399

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see Souleyrette, Reginald R., (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p182-194

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a, Peter M.

Arizona's Uniform Traffic Impact Procedures, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Eric Kalivoda, p94-98

Lin, A. N. Seismic Performance of Fixed-Base and Base-Isolated Steel Frames, with H. W. Shenton, III., EM May 92,

p921-941

Lin, C. P. see Weng, C. C., ST Jan. 92, p128-146

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Lin, Chung-Chih

An Exact Expression for the Distribution of Linear Combinations of Uniform Random Variables, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Mare P. Mignolet, p555-558

Lin, Feng-Bor Saturation Flow and Capacity of Shared Permissive Left-Turn Lane, TE Sept./Oct. 92, p611-630

Lin, George Stability of Frames with Grade Beam and Soil Interac-tion, EM Jan. 92, p125-139

Real-Time Simulation and Visualization of 2-D Surface Water Flow, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jen-nings, ed. and Nani G. Bhowmik, ed., 1992), with N. L. Jones and D. R. Richards, p335-340

Lin, Hong-Tsung see Chen, Wen Jeng, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p936-939

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Lin, Hung-Cheng see Chen, Chun-Sung, SU May 91, p51-66

see Cnen, Cnun-Sung, SU May 91, p51-66
Lin, Jeen-Shang
Computer Simulation of Direct Shear Test, (Engineering
Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), with John M. Ting, Baliso
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Evaluation of Seismic Soil Response Using Stochastic
Linearization, (Probabilistic Mechanics and Structural
and Geotechnical Reliability, Y. K. Lin, ed., 1992),
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in Jin-Sheng

Comparison of Dispersion Models for Wastewater Treatment Emissions, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Lynn M. Hildemann, p?-

Lin, Kuanchung J.
Nonlinear Behavior of Thin Slender Free Surface Non-Newtonian Elliptical Rings, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p216-219

Lin, L. Y. see Malasri, S., (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p285-

see Bauer, S. J., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p2267-2277

Lin, Shaopei Machine Learning in Planning and Control, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Zhenyi Zhao and Yingiian Soong, p991-998

in, Shin-Hua

Lin, Shin-Hua ASCE LRFD Method for Stainless Steel Structures, with Wei-Wen Yu and Theodore V. Galambos, ST Apr. 92, p1056-1070

Lia, T. D.
Concrete Construction on the Moon, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Nan Su, p1359-1369

Lin, W. J. see Meek, J. L., ST June 90, p1473-1490

Probabilistic Mechanics and Structural and Geotechnical Reliability, 1992, 0-87262-873-6, 614pp. see Cai, G. Q., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p148-151

see Cai, G. Q., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p796-799

see Zhang, Ruichong, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p256-259

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see Kuo, Jan-Tai, WR May/June 90, p349-361

Linaweaver, F. Pierce Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, 1992, 0-87262-878-7, 685pp.

Lindemann, Randel A. see Dias, William C., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p357-

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Lindsey, Jean E.

Housing Opportunity or Social Engineering Implement-ing the Jobs-Housing Relationship—The Town of Wel-lington Experience, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p82-90

Linehan, P. W.
Pipeline Response to Pile Driving and Adjacent Excava-tion, with A. Longinow and C. H. Dowding, GT Feb. 92, p300-316

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Computer Simulation of Dry Layered Granular Flow Down an Incline Composed of Grains, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Chyan-Deng Jan, p760-763

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Numerical Simulation of a Sphere Moving Down an Incline with Identical Spheres Placed Equally Apart, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Chyan-Deng Jan, Chenglung Chen and Hsieh Wen Shen, 764-767
Stress Strain Relation in Debris Flow Analysis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Cheng-lung Chen and Chyan-Deng Jan, p852
see Jan, Chyan-Deng, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p768-771

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Lingem, Rajasekhar
see Corapcioglu, M. Yavuz, (Water Resources Planning
and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), p254-259

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1992), p176-179

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User Interface for Pipe Network Program, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1049-1054

Lischer, Harry, Jr. disc. (of The Development of the Construction Engineer: Past Progress and Future Problems, by John W. Fon-dahl, CO Sept. 91, p380-392), CO Dec. 92, p824-825

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Lissenden, Cliff J.

Comparison of Micromechanical Models for Elastic Properties, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Carl T. Herakovich, p1309-1322

List, E. John

Diffusion and Dispersion in Coastal Waters, with Gregory Gartrell and Clinton D. Winant, HY Oct. 90, p1158-1179 disc: Akira Okubo, HY Apr. 92, p655-656 clo: HY Apr. 92, p656

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Jata Needs for Locating Emergency Response Units, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p437-441

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Mass Transfer of Volatile Contaminants in Showers, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p163-168

Little, Keith W.

disc. (of Statistical Evaluation of Mechanistic Water-Quality Models, by Kenneth H. Reckhow, J. Trevor Clements and Randall C. Dodd, EE Mar./Apr. 90, p250-268) with Nancy F. Stevens, EE Jan./Feb. 92, p154-155

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Advancing Anchorage Technology, CE July 92, p61-64 Ground Anchorage Technology—A Forward Look, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), 939-62

Littler, John David

Discussion of: Structural Damping Estimation for Long-Span Bridges, EM Apr. 92, p847-850 err: EM Sept. 92, p1986

Liu, Bill Y.

Treatability Study on the Biological Treatment of Land-fill Leachate and Gas Condensate, (Environmental En-gineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Alan Y. Li and James F. Urek, p405-410

Liu, D. T.

Liu, D. T. see Roth, W. H., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed. 1992, p940-955
see Roth, W. H., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1349-1364

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see Casciati, Fabio, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p17-20

Liu, Fubo

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Liu, L. Y.
Graphical Object-Oriented Simulation System for Construction Process Modeling, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with P. G. Ioannou, p1139-1146

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Liu, Yingwei
Use of Importance Sampling Constraints in System Optimization, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), with Fred Moses, p112-115

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see Whipple, William, Jr., (Water Resources Planning and
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Search of Solutions, Mohammad Karamouz, ed.,
1992), 9843-848

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Livueh, Monhe see Ishai, Ilan, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1067-1079

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Los, Wei-Whus Development of Radioactive Waste Management Licensing Review Assistant, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Suan Chen, Wei-Chu Yu, Chao-Ming Pong, Ching-Lun Huang and Chen Lin, p243-249

Louiciga, Hugo A.
Probability and Climatology of Droughts in the Western
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Laba, Roy F.
3D Inelastic Dynamic Analysis of RC Structures, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Sashi K. Kunnath and Andrei M. Reinhorn, p905-912

Lockwood, Ian see Braaksma, John P., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p175-179

Loftis, Jim C. see Mizyed, Numan R., WR July/Aug. 92, p371-387

Loganathan, G. V. A Frequency Surface for Rainfall Intensity and Duration, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), with M. A. Parkin, p386-Optimal Design of Parabolic Canals, IR Sept./Oct. 91,

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Long, Austin see Childs, Stuart W., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1633-1642

Longest, Henry L., II.

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Loper, John

Development Impact Assessment with Transportation Models, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Robert C. Hazlett, Jr., p233-237

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see Fereres, Elias, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p215-220

López, Roberto A.

The Use of Vibro Systems in Seismic Design, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Robert F. Hayden, pl 433-1445

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Lorenzo, Andres C.
Behavior of Urugua-1 Dam, (Roller Compacted Concrete
III, Kenneth D. Hansen, ed. and Francis G. McLean,
ed., 1992), with Silvio S. Calivari, p.272-290

Lorig, Loren J.

see Gupta, Dinesh C., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p212-219

da, J.

see Moreno, L., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p840-849

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see Grilli, S. T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82

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see Shing, P. B., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p780-783

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Design, Construction, and Performance of a Baffled Breakwater, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Walter E. Hurtienne, p487-502

oucks, Daniel P.

Water Resource Systems Models: Their Role in Planning, WR May/June 92, p214-223

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Loudon, William

Integrated Software for Transportation Emissions Analysis, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), with Malcolm Quint, p161-176

Louie, Peter W. F.

see Diba, Ali, (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), 31(4.22) p316-321

see Hsu, Nien-Sheng, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p598-603

see Jiang, Clarence, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p426-433

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Love, Ethan A.

Experimental Investigation of Self-Tapping Fasteners for Attachment of Corrugated Cladding Panels to Pultruded Fiber-Reinforced Plastics Beams in Industrial Building Construction, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Tanongsak Bisarnsin, p577-584

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see Ahmed, Imtiaz, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p166-181

Lovell, Jeffrey S.

disc. (of Accurate Method for Calculation of Saturation DO, by Hesong Hua, EE Sept./Oct. 90, p988-990) with Timothy J. Register, Steve C. McCutcheon and Thom-as O. Barnwell, Jr., EE Sept./Oct. 92, p822-824

Lovett, Thomas G.

Double Diamonds: New Brand for a Texas Bridge, with Dennis W. Warren, CE Apr. 92, p42-45

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D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Jennings, ed. and Nani G. Bhowmik, ed., 1992),
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see Seymour, Richard J., (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p258-275

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see Marino, A. David, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p581-586

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no, Mary L.

Human Factors and System Safety in the Management of High-Level Radioactive Waste, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1542-1546

ozar, Robert C.

The Army Corps of Engineer's (ACE) Interaction with the Mission to Planet Earth Initiative, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2094-2103

gineering, Construction, System (GIS) Technology in Global Environmental Evaluation—An Overview, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2104-2127

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La, Zhaodong Numerical Simulation of a Shallow Estuary—Weeks Bay, Alabama, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Barry McCormick, Chris Faison, Gary April, Donald Raney and William Schroeder, p418-429

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An ORIGEN2 Update for PCs and Mainframes, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p93-98

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Modeling 3-D Circulation Using the DSS Technique, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), with S. Hu, J. J. Westerink and N. W. Scheffner, p632-643

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Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
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Lai, Eric M. Geometrical Imperfections on Inelastic Frame Behavior, ST May 92, p1408-1415 Nonlinear Structural Analysis on a Distributed System, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Fred H. Schlereth, 4175-42. p647-654

nkas, Robert G.

Lanas, Robert G.

Dynamic Compaction Engineering Considerations, (Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), 9940-953

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see Scheynayder, Cliff (Grouting, Soil Improvement and

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atershed Models for Resources Management Decisions, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p884-889

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Lund, Jay R. Benefit-Cost Ratios: Failures and Alternatives, WR Jan./

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Computation of the Least Eigenvalue on a Memory-Sharing Multiprocessor Computer, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), 974-761

Luongo, Vince
Dynamic Compaction: Predicting Depth of Improvement, (Grouting, Soil Improvement and Geosynthetics,
Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p927-939

utes, Loren D.

Engineering Mechanics, with John M. Niedzwecki, ed., 1992, 0-87262-867-1, 1105pp. Simulation of Improved Gaussian Time History, with Jin Wang, EM Jan. 91, p218-224

Wang, EM Jan. 91, p218-224
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disc. (of Fatigue Strength of Deteriorated Steel Highway
Bridges, by Patrick D. Zuraski and John E. Johnson,
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Lutes, ed. and John M. Niedzwecki, ed., 1992),
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see Wang, Jin, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p463-466

Luthy, Richard G.

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Lutton, Richard J.

Problems With Armor-Stone Quality on Lakes Michigan,
Huron, and Erie, \*Ourability of Stone for Rubble Mountain
Berackwaters, Orville T. Magoon, ed. and William F.
Baird, ed., 1992), with Ronald L. Erickson, p115-136

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Lucz, Charles B.

Interpreting Dredge Material Bioassay Data—COBIAA,
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MacAtthur, Robert C.
Analyses of Special Hazards and Flooding Problems in Tropical Island Environments, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Douglas L. Hamilton, Michael D. Harvey and Hudson W. Kekaula, p1061-1066

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Asymptotic Importance Sampling, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Karl Breitung and Philippe Geyskens, p96-90.

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cio: SI Oct. 92, p2947

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Agricultural Impacts on Surface Water via Ground
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1992), with Adel Shirmohammadi, James D. Wood
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Durability of Stone for Rubble Mound Breakwaters, with William F. Baird, ed., 1992, 0-87262-863-9, 288pp. disc. (of Breakwater Breakthrough—Bold New Breakwaters, by William F. Baird, Kevin Hall and Virginia Fairweather, CE Jan. 87, p45-48), CE Apr. 87, p38

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Matter, N. H., C. (1997) Annual Control of Coundations, (Grouting, Soil Improvement and Geosynthesics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with J. P. Welsh, p855-866

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Automated Knowledge Acquisition of Preliminary De-sign Concepts, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p975-982

Frame-Based Representation, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), with Priti Vora, p60-79

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Dynamic Response of Sand Reinforced with Randomly
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SALSA: A Lunar Submillimeter-Wavelength Array, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with K. A. Marsh, p1902-1912

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see Karunasena, W. M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559

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iveason, pruce F.
disc. (of Seismic Panel Zone Design Effect on Elastic
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Majer, Ernest

Majer, Ernest
High Resolution Seismic Imaging for Characterizing
Fractures in Potential Sites for Nuclear Waste Repositories, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with Larry Myer, John Peterson
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Maji, A. K.

Determination of In-Situ Stresses From Acoustic Emissions, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p405-408

Jonn M. Niedzwecki, ed., 1992), p405-408
Mechanical Response of Cellular Materials Used in
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Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), with S. Donald and H. L. Schreyer, p308-311
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Landfill Storm Water Runoff Control, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Daniel Pazdersky, p423-428

NPDES Permitting for Storm Water Discharges Associated with Industrial Activity, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhownik, ed., 1992), with John G. Garland, III., p797-802

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Online Design Codes: An Integrated Approach, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with J. C. Olabe and L. Y. Lin, p285-292

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Males, Richard M.

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Upper Bound Limit Analysis of Deep Skirt Structures' Foundations, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with James D. Murff, p571-584

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Floating or Fixed Dock for RO/RO Ship Operations, (Ports '92, David Torseth, ed., 1992), with Curtis L. Ratcliffe, p709-722

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Fraulation of Seismic Vulnerability of Highway Bridges in the Eastern United States, (Lifeline Earthquake En-gineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), with F. D. Panthaki and M. T. Chaudhary, p72-86

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Phobias and Underutilization of University Scientists: A
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Short Beach Nourishment Fill Performance on an Irregular Coatline, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Lamont W. Curtis and Thomas H. Daniel, p104-119

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Kenneth D. Hansen, ed. and Francis G. McLean,
ed., 1992), p63-82

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Analysis of Slope Failure and Remedial Design of an Earth Dam, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Robert E. Snow, p923-939 see McMahon, Donald R., (disc), GT Dec. 90, p1811-1830

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and Embankments II. Raymond B. Seed, ed. and
Ross W. Boulanger, ed., 1992), pl 126-1136

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Use of Machine Vision in Bedform Studies, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Wenxue Li, p840-845

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Expert System for Operating A Treated Water Supply
System, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p867-871

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System Engineering and Risk, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p304-

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Marcuson, W. F., III.

Seismic Stability and Permanent Deformation Analyses: the Last Twenty Five Years, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with M. E. Hynes and A. G. Franklin, p552-592

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Realistic Specifications for Manufactured Sand, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p245-260

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Multi-Stage Diffused Bubble Aeration System for the Removal of Volatile Organics and Radon, a Case History, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Jerry Lowry, p581-586

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see DiLorenzo, Joseph L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p151-157

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Marifo, Miguel A.
Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p90-95
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Mark, David J.

Mark, Davis J.

Hydrodynamic and Water Quality Modeling of Lower Green Bay, (Essuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1932), with Barry W. Bunch, p557-668

see Kim, Keu W., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p500

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Regulatory Law and Policy to Support Space Mining, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with William R. Sharp, p2208-2219

Marold, W. J.

Design of the Boney Falls RCC Emergency Spillway, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p476-490

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Reactivity End-Effects Estimates Using A K<sub>∞</sub> Perturbation Model, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2165-2173

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see Freedman, Paul L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p85-39

Marr, W. Allen

see Steiner, Walter, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720

Marra, S. L.

Thermal History and Crystallization Characteristics of the DWPF Glass Waste Form, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. E. Edwards and C. M. Jantzen, p917-924

Marsh, Bruce D.

Longevity of Magma in the Near Subsurface: A Study Using Crystal Sizes in Lavas, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Ronald G. Resmin, p2023-2032

Marsh, Bruce E.

Ph.D. Roadblocks for Experienced Engineers, El Jan. 90, p56-60 disc: Maurice L. Albertson, El Apr. 92, p193-194 disc: Amitabha Bandyopadhyay, El Apr. 92, p195-

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disc. (of Optimal Design for Plate Buckling, by W. R. Spillers and Robert Levy, ST Mar. 90, p850-858), ST Jan. 92, p336-337

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see Mahoney, M. J., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1902-

Marsh, Kenneth A.

Concept for a Lunar Array for Very Low Frequency Radio Astronomy, Engineering, Construction, and Op-erations in Space III. Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Michael J. Mahoney, Thomas B. H. Kuiper and Dayton L. Jones, p1935-1940

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see Peterman, Z. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1582-1586

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see Yodnane, Precha, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p250-255

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Marshall, Peter W.

The Mother of All Resilient Structures: Fixed-Base Tower in 3000-Foot Water and Some Outstanding Issues, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Susan L. Smolinski and Denby G. Morrison, p258-272.

Screening Old Offshore Platforms: Previous Approach and Further Thoughts, (Civil Engineering in the Ocea V, Robert T. Hudspeth, ed., 1992), p518-530

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see Gattis, J. L., (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20

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Martin, D. L.

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see Grilli, S. T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82

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Martin, Geoffrey R.

Evaluation of Soil Properties for Seismic Stability Analyses of Slopes, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.

Boulanger, ed., 1992), p116-142
see Somasundaram, Suji, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p669-684

Martin, J. P.

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Martin, Jeffrey L. see Darwin, David, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497

Martin, Maria J.
see Iribarren, José R., (Civil Engineering in the Oceans V,
Robert T. Hudspeth, ed., 1992), p149-157

see Izbicki, John A., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p122-127

see Richman, Mark W., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p900-903

Martin, Sandra K. Riprap Design in Marine Terminals, (Ports '92, David Torseth, ed., 1992), with Stephen T. Maynord, p364-

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Martin-Benito, José Marí Tarjuelo Working Conditions of Sprinkler to Optimize Applica-tion of Water, with Manuel Valiente Gómez and Juan Lozoya Pardo, IR Nov/Dec. 92, p895-913

Martinez, Benerito S., Jr.

Development of a Protocol to Evaluate Volatility and Biodegradability Characteristics of Turpene-Based Sol-vent Substitutes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Ricardo B. Jacquez and Walter H. Zachritz, II., p169-174

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Frontloading for Successful Team-Built Projects, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p504-507

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Martinson, Ronald E. ser Pierce, David, (Ports '92, David Torseth, ed., 1992), p418-428

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Computer Iterative Technique for Soil-Structure Interac-tion, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p418-425

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Masoa, Larry W.

Beneficiation and Comminution Circuit for the Production of Lunar Liquid Oxygen (LLOX), (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1139-1149

On the Beneficiation and Comminution of Lunar Regolith, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1127-1138

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Availability of Shear Strength Reduction Technique, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Ka-Ching San, p445-460

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Matsamoto, Eric E.

Matsamoto, Eric E.

Non-Circular Cross Section, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.

Miller, ed., 1992), with Shayan Pazargadi and Philip J.

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Mazars, Jacky
On the Modelling of Damage Due to Volumic Variations
in Cementitious Composites, (Engineering Mechanics,
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1992), with Jean Pierre Bournazel, p482-485

Mazea, S. Ossams
The Design of a Reclamation Scheme by Preloading,
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Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), p1019-1030

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disc. (of Local Scour Downstream of Box-Culvert Outlets, by H. Abida and R. D. Townsend, IR May/June 91, p425-440), IR Nov./Dec. 92, p1001-1003

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1992), p784-789

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Utilization of Waste Sulfur in Construction Materials and as a Stabilization/Encapsulation Agent for Toxic, Hazardous and Radioactive Waste, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed, and Kenneth L. Bergson, ed., 1992), with Frank E. Ward, William T. Dohner and Harold Weber, p116-127

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Management, High Level Radioactive Waste Management Program Committee, 1992), p427-431

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McCombie, C.
Application of Performance Assessment as a Tool for Guiding Project Work, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. Zuidema, p2126-2135

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Limehouse Link Tunnel Project—London—A Case History, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), with David Scott and George Tamaro, p65-90

1992), with Davis Good and McCaee, Richard H.
Educating Engineers for the Future: Two Views, with Andrew Olmstead, CE Feb. 92, p6,10
Engineering Ethics in A Multicultural Global Economy,
El July 91, p258-266
disc: James C. Porter, El Oct. 92, p429-430
clo: El Oct. 92, p430-431
Children of Engineerine-Design-Class Lectures on Eth-

clo: El Oct. 92, p430-431
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disc: P. Aarne Vesilind, El Apr. 92, p214-215
clo: El Apr. 92, p215-216
see Brubaker, Kaye L., El Oct. 90, p375-387
see Kibler, David F., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p725-728

McCallouch, Bob G.
Automated Construction Field-Data Management System, TE July/Aug. 92, p517-526
see Krippaehne, Robert C., ME Apr. 92, p153-166

see Russell, Jeffrey S., El Apr. 90, p164-174

McCutcheon, Steve C.

McCutcheos, Steve C.
Benthic Exchange of Toxic Contaminants, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), with Danny Reible, p386
disc. (of Modeling DO Conditions in Streams with Dispersion, by Antonis D. Koussis, Prashant Kokitkar and Adosh Mehta, EE May/June 90, p601-614), EE Jan/Feb. 92, p156-159
see Lovell, Jeffrey S., (disc), EE Sept/Oct. 90, p988-990

McDaniel, John L.

see Rattan, Gene N., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p50-55

McDermott, Joseph M. Advanced Technology Applications in Chicago-Area Freeway Traffic Management Program, TE May/June 92, p451-456

McDonald, David T.

Dynamic Response Characteristics of Jack-Up Drilling Units, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Robert G. Bea, p906-920

McDonald, E.

see Crowe, B., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013

McDonald, James R.

see Harris, Harold W., CE June 92, p77-78

McDonald, Richard

see Bhattacharyya, Kalyan K., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1521-1526

McDonald, Richard R.

The Morphology and Dynamics of Natural and Laboratory Grain Flows, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Robert S. Anderson, p748-751

McDonough, Tom see Shiao, Ming. (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1136-1141

McDougal, W. G. see Williams, A. N., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p203-217

McDougal, William G.
see Thompson, Gary O., (Civil Engineering in the Oceans
V, Robert T. Hudspeth, ed., 1992), p129-148

McEnroe, Bruce M.

Design of Landfill Drainage Systems, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p208-213 Preliminary Sizing of Detention Reservoirs to Reduce Peak Discharges, HY Nov. 92, p1540-1549

Sizing Stormwater Detention Reservoirs to Reduce Peak Flows, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p719-724

McFadden, L.
see Crowe, B., (High Level Radioactive Waste Management,
High Level Radioactive Waste Management
Program Committee, 1992), p1997-2013

McFarland, D. M.

Response of Mono-Coupled Distributed Parameter Sys-tems to Random Excitation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with L. A. Bergman and G. G. G. Lueschen, p576-579

McFariane, T. S.

McParvane, 1. S. Selection and Laboratory Evaluation of Modifying Additives for Soil-Cement-Bentonite, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with R. D. Holtz, p1006-1018

McFarquhar, Dudley G. The Crown and the Curtain Wall, CE Aug. 92, p62-65

McGee, Richard G.

An Acoustic Impedance Method for Subbottom Material Characterization, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Robert F. Ballard, Jr., p1030-1035

McGehee, David D.

Remote Automated Wave and Water Level Monitoring System Deployed at Agat Harbor, Guam, (Coastal En-gineering Practice '92, Steven A. Hughes, ed., 1992), p898-907

Results of a Monitoring Program of Moored Ship Response to Gravity and Infragravity Waves, (Ports '92, David Torseth, ed., 1992), p591-601

see Briggs, Michael J., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p387-399

McGowa, A.

The Behavior of Reinforced Soil Walls Constructed by Different Techniques, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with K. H. Loke and R. T. Murray, p1237-1248

McGraw, John T.
The Lunar Transit Telescope (LTT): An Early LunarBased Science and Engineering Mission, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p1865-1879

McGuinness, M. E. see Swint, D. O., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160

see Shaw, R., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p869-873

McGuire, Robin K.

Perspectives on Seismic Design Basis Deterministic and Probabilistic Approaches, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Robert T. Sewell, Gabriel R. Toro and J. Carl Stepp, p1137-1141

McGuire, William

Comments on L'Ambiance Plaza Lifting Collar/ Shearheads, CF May 92, p78-85 err: CF Aug. 92, p205 see Ziemian, Ronald D., ST Sept. 92, p2532-2549 see Ziemian, Ronald D., ST Sept. 92, p2550-2568

McIlvaine, Cindy see Miller, Terry L., (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p100-125

McIlvaine, Howard

see Pearce, Bryan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p959-964

McIndoe, Darrell W.

Understanding the Medical Applications of Radionu-clides, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1478-1484

McInnis, Duncan

see Karney, Bryan W., HY July 92, p1014-1030

McIntosh, K. R.

see Weaver, K. D., (Grouting, Soil Improvement an Geosynthetics, Roy H. Borden, ed., Robert ( Holtz, ed. and Ilan Juran, ed., 1992), p1332-1343 see Weaver, Ken, CE May 92, p70-72

McIntyre, C.

see Syal, M. G., (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p207-

McKay, David S.

see Allen, Carlton C., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p629-640

see Allen, Carlton C., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-

see Taylor, Lawrence A., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1058-

McKenna, Henry A.

see Flory, John F., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p934-947

McKenney, Kristi

Effective Airport Environs Planning in the 1990s, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p25-31

McKerchar, A. I.

Regional Flood Frequency Analysis Using Maps, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with C. P. Pearson, p19-24

McKim, R. A.

disc. (of Systematic Risk Management Approach for Construction Projects, by Jamal F. Al-Bahar and Keith C. Crandall, CO Sept. 90, p533-546), CO June 92, p414-

McKintey, I. G.

Application of Results from the Poços de Caldas Project in the Kristallin-I HLW Performance Assessment, (High Level Radioactive Waste Management Program Committee, 1992), with W. R. Alexander, C. McCombie and P. Zuidema, p357-361

Can the Kristallin-I Near-Field Model be Considered Robust?, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. A. Smith and E. Curti, p1770-1776

McKinley, W. Scott
Cleaning Up Chromium, with Randy C. Pratt and Loren
C. McPhillips, CE Mar. 92, p69-71

McKinney, Daene C.

Water Planning Using an Expert GIS, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with David R. Maidment and Mustafa Tanriverdi, p219-224

McKinney, Darlene

see Fangmann, Steve, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274

McKinnis, W. B.

see Nilson, R. H., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p710-716

McKinnon, Mikal A.

Testing and Cobra-SFS Analysis of the VSC-17 Ventilated Concrete, Spent Fuel Storage Cask, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Committee, 1992), with Richard C. Schmitt, p764-772

McKinstry, Dawn L

see Koby, Ann L., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p37-41

McKnight, Charles A. see Abt, Steven R., HY Dec. 92, p1692-1696

McLain, Thomas E. Strength of Lag-Screw Connections, ST Oct. 92, p2855-2871

see Foliente, Greg C., ST Sept. 92, p2407-2420

McLaughlin, Dennis see Li, Shu-Guang, HY Aug. 92, p1079-1090

McLaughlin, K. I. see Dimmitt, A. K., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299

McLaughlin, Karen see Welch, Douglas, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p203-208

McLean, Francis G. see Hansen, Kenneth D., ed., Roller Compacted Concrete

see Wilson, ilson, John A., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p653-668

McLellan, Neil T. see Aidala, James A., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1234-1239

McLeod, Harvey N. see Harper, Thomas G., CE Dec. 92, p64-66

McMahon, Donald R.
disc. (of Water Content-Density Criteria for Compacted Soil Liners, by David E. Daniel and Craig H. Benson, GT Dec. 90, p1811-1830) with Michael J. Mann, GT June 92, p965-967

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McManis, Kenneth L.

disc. (of Analysis of Compressibility of Sensitive Soils, by T. S. Nagaraj, B. R. S. Murthy, A. Vatsala and R. C. Joshi, GT Jan. 90, p105-118), GT Jan. 92, p165-168

McMicking, James H. see Miller, Carol J., El Apr. 90, p221-228

McNamara, J. F.

McNamara, J. P.
3D Frequency Domain Analysis of Offshore Structures, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with M. Lane, p192-195

McNeil, Sue

Emerging Issues in Transportation Facilities Manage-ment, with Michael Markow, Lance Neumann, Jeffrey Ordway and Donald Uzarski, TE July/Aug. 92, p477-

McNelis, M.

see Mesarovic, S., EM May 92, p961-978

McPhillips, Loren C. see McKinley, W. Scott, CE Mar. 92, p69-71

McShane, Mary P.
Major Public Transportation Investments as "Development Projects": Old Colony Railroad, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.138-142

McSherry, Art J.

Design and Licensing of the VSC Dry Fuel Storage System, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with John V. Massey and Boris A. Chechelnitsky, p1216-1220

McTernan, W. F.

see Ho, P. S., (Environmental Engineering: Saving a Threatened Re: ource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p364-369

McTernan, William F.

see Arora, Pankaj A., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p451-456

see Xue, Zhihuai, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p180-185

McTigue, David F.

see Sture, Stein, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p10351038

McVan, D. C. see Johnson, B. H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1036-1041

Design of Socketed Drilled Shafts in Limestone, with F. C. Townsend and R. C. Williams, GT Oct. 92, p1626-

see Townsend, F. C., GT Feb. 90, p222-243

Mebarkia, S.

Compressive Behavior of Glass-Fiber-Reinforced Polymer Concrete, with C. Vipulanandan, MT Feb. 92, p91-105

Compressive Strength and Characterization of Failure Modes for Polymer Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with C. Vipulanandan, p988-991

Medde, K. S.

see Hughes, W. C., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12

Medina, Daniel E.
see Reddi, Lakshmi N., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p575-580

Medina, Mignel A., 5r.
see Jacobs, Timothy L., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p748-753

Medley, David F., See Peters, Dale T., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p366-376

Medley, L. G.

see Attaway, C. R., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1336-1342

Meek, J. L

Geometric and Material Nonlinear Analysis of Thin-Walled Beam-Columns, with W. J. Lin, ST June 90, disc: Sundaramoorthy Rajasekaran, ST Apr. 92, p1150-1151

Meek, Jethro W.
Cone Models for Homogeneous Soil. I, with John P.
Wolf, GT May 92, p667-685
Cone Models for Soil Layer on Rigid Rock. II, with John P. Wolf, GT May 92, p686-703
see Wolf, John P., (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p94-113

Meenan, C. see Edwards, B., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p943-948

Mehta, Adosh see Koussis, Antonis D., EE May/June 90, p601-614

Mehta, Brijesh Kumar Design and Operation of On-Farm Irrigation Ponds, with Akira Goto, IR Sept./Oct. 92, p659-673

Mehta, Kishor C. see Harris, Harold W., CE June 92, p77-78

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Mei, Chiang C.
Geomechanics of Subsidence Due to Pumping of Groundwater, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1-26 see Ng. Chiu-on, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p892-895

Meininger, Curtis A. see Bowen, James D., (Ports '92, David Torseth, ed., 1992), p443-455

Melby, Jeffrey A.

Application of a Dolos Structural Design Procedure, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p830-846

see Kirby, James T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p204-207

Melcer, Hearyk see Corsi, Richard L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p305-310

Melchers, R. E.

Linearisation and Offshore Fatigue Reliability, (Probabi-listic Mechanics and Structural and Geotechnical Relia-bility, Y. K. Lin, ed., 1992), with M. Ahammed, p5-8

Load-Space Formulation for Time-Dependent Structural Reliability, EM May 92, p853-870 Sampling Techniques for Time-Variant Reliability Prob-lems, (Probabilistic Mechanics and Structural and Geo-technical Reliability, Y. K. Lin, ed., 1992), p100-103 see Li, C. Q., ST Sept. 92, p2323-2337

Metching, Charles S.
Improved First-Order Uncertainty Method for Water-Quality Modeling, with Sharath Anmangandia, EE Sept./Oct. 92, p791-805

Melton, Bob see Grigsby, Doris K., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2161-2171

Meiville, B. W. Local Scour at Bridge Abutments, HY Apr. 92, p615-631

Melville, Bruce W.
Bridge Pier Sour with Debris Accumulation, with D. M.
Dongol, HY Sept. 92, p1306-1310
disc. (of Study of Time-Dependent Local Scour Around
Bridge Piers, by A. Melih Yanmaz and H. Doğan
Altınbilek, HY Oct. 91, p1247-1268), HY Nov. 92,
p1593-1595

Memon, Altaf A.

State Permit Program and Toxics Individual Control

Strategies: A Case Study, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p561-566

Mean, Maria Pia
Nitrogen Removal from a High-Strength Ammonia
Leachate, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), with John Fillos and Jifang
Zhu, p417-422

Mendelsohn, D. see Spaulding, M. L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175

1992), p170-175

Mendelsohn, Daniel L.

Application of a Boundary Fitted Coordinate Mass Transport Model, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with J. Craig Swanson, p382-404

see Swanson, J. Craig, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Kaiph Cheng, ed. and Craig Swanson, ed., 1992), p489-500

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Meadoza-Cabrales, César
The Net-Flux Sediment Concentration Bottom-Boundary
Condition for Rippled Beds, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p126-131

Menke, William Sharing Waste Management Data Over a Wide Area Computer Network, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Paul Friberg, p827-832

Mercier, G. see Couillard, D., EE Sept./Oct. 92, p808-813

Merdes, Robert S.

Neutralysis. Lightweight Aggregate and Recycling, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p81-91

Merida, Luis
see Thiers, Gerald R., (Stability and Performance of
Slopes and Embankments II, Raymond B. Seed, ed.
and Ross W. Boulanger, ed., 1992), p205-221

Merkel, William H.

SCS Water Surface Profile Model—WSP2, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Donald E. Woodward, p859-864

Merkhofer, M. W.

A Decision Analysis of an Exploratory Studies Facility, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. Gnirk, p650-656

Merkley, G. P. see Gichuki, F. N., IR Jan./Feb. 90, p67-82

see Gichuki, F. N., IR Jan/Feb. 90, p67-82
Merriam, John L.
Case Studies of Semi-Closed Pipeline Systems for Flexible Deliveries, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p468-473
Case Studies of Utilizing a Flexible Automated Supply in Developing Countries, (Water Resources Planning and Management: Saving a Threatened Resource-In Search of Solutions, Mohammad Karamouz, ed., 1992), p623-630

page 3-9-30 Use of Pitot Projects for Technology Transfer in Developing Countries, (Irrigation and Drainage: Saving a Threatened Resource-In Search of Solutions, Ted Engman, ed., 1992), p238-243

Merrill, Chris A.

Nonlienar, Incremental Analysis of Olmsted Locks, (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Sharon B. Garner, p921-928

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Mesa, Chuck

A Dual Approach to Low Frequency Energy Definition in a Small Craft Harbor, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p400-411

Mesarovic, S.

Dynamic Behavior of Nonlinear Cable System. I, with D. A. Gasparini, EM May 92, p890-903

Dynamic Behavior of Nonlinear Cable System. II, with D. A. Gasparini, EM May 92, p904-920

Probability of Crack Growth in Poisson Field of Penny Cracks, with D. Gasparini, S. Muju and M. McNelis, EM May 92, p961-978

Mesdaghinia, A. R. see Asadi, Mahmoud, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p610-616

Meselhe, Ehab A

de St. Venant Modelling in the Irrigation Environment, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Forrest M. Holly, Jr., p1124-1129

Simultaneous Design and Control of Stiffened Laminated Composite Structures, with Manohar P. Kamat, AS Jan. 92, p111-126

Postdensification Penetration Resistance of Clean Sands, with T. W. Feng and J. M. Benak, GT July 90, p1095-1115

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Multireservoir Sewer-Network Control via Multivariable Feedback, with M. Papageorgiou, WR Nov./Dec. 92, p585-602

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Metcalf, David D.

Leveraging the Use of Geographic Information Systems in Highway Corridor Studies, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Mark R. Urban, p174-181

Metcalf, J. B.

The Diagnosis of Pavement Ills, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p66-79

Metcalf, Megan
Santa Cruz Dam Modification, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Timothy P. Dolen and Paul A. Hendricks, p459-475

Metzger, Richard see Steiner, Walter, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p705-720

Meyer, G. K.
Global Climate Change Effects on Water Quality, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), with G. T. Orlob, p19-24

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see Khalfallah, Majed, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p929-933

Mhaiskar, S. Y.

Soft Clay Subgrade Stabilization Using Geocells, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with J. N. Mandal, p1092-1103

Mise, Bingqi

Recursive Parameter Estimation for ARMA Simulations, EM Dec. 92, p2484-2490

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Michaels, Gordon E.

see Croff, Allen G., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1359-1367

Michalowski, Radoslaw I.

Bearing Capacity on Nonhomogeneous Cohesive Soils under Embankments, GT July 92, p1098-1118

Stability of Embankments over Weak Soils of Limited Thickness, Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), pl 142-1152

Michel, Dominique F.
see Krizek, Raymond J., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p712-724

Michel, Robert L. see Izbicki, John A., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p122-127

Michener, T. E.

see Eyler, L. L., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p636-642

Michetti, F. P.

see Eletti, G. F., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p256-262

Mickleborough, Neil C. disc. (of Tenure—Analysis for Professional Engineers in Education, by William Lawson Magette, El Apr. 90, p142-147), El Apr. 92, p214

Middleton, David see Trani, Antonio A., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24

see Yfantis, E. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2339-2343

Miernyk, Jim

see Larson, Douglas, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1730-1736

Mierzejewski, Edward A.
Computerized Transportation Planning Models for Site
Impact Analysis: Precision or Complexity?, (Site Impact Traffic Assessment: Problems and Solutions,
Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C.
Sutaria, ed., 1992), with Timothy Jackson, p128-132

Migits, Yasshiro
Local and Interaction Buckling of Polygonal Section Steel
Columns, with Testuhiko Aoki and Yuhshi Fukumoto,
ST Oct. 92, p2659-2676

Mignolet, Marc P.
Exact Nonstationary Response of a Sliding Rigid Structure to a Modulated White Noise Base Excitation, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Guangwau W. Fan, p408-411. (Beobabilistic Mechanics and Structural Collins of Structural C

see Lin, Chung-Chih, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p555-558

Mihm, Mark S.

see Gow, Diane A., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p309-314

Miki, Chitoshi

see Takena, Koei, ST Mar. 92, p701-715

Miki, Mitsunori see Murotsu, Yoshisada, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p547-550

Mikki, Susanne R. see Svendsen, Harald, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p252-267

Mikulas, Martin M., Jr. see Namba, Haruyuki, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p284-295

Milhous, Robert T.
Habitat Simulation in United States, Britain, and France, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Ian Johnson, Yves Souchon and Sylvie Valentin, p362-367
Is An Instream Flow Need a Beneficial Use?, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p368-373

Miller, Andrew C. see Ingram, John J., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p606-611

Miller, Arthur C

see Aron, Gert, (Hydraulic Engineering: Saving a Threat-ened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p846-851

Miller, B. A.

Integrated Assessment of Temperature Change Impacts on the TVA Reservoir and Power Supply Systems, (Hy-draulic Engineering: Suring a Threatened Resource— In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with V. Alavian, M. D. Bend-er, D. J. Benton, P. Ostrowski, Jr., J. A. Parsly and M. C. Shiao, p563-568

see Brickell, J. L., El July 92, p240-249

Miller, Carol J.

Educational Program for Hazardous-Waste Management,
with Ralph H. Kummler, James H. McMicking and
Robert W. Powitz, El Apr. 90, p221-228
disc: Robert A. Green, El Jan. 92, p93
disc: Bruce E. Marsh, El Jan. 92, p93-95
clo: El Jan. 92, p95

Miller, Carolya L. see Holland, Peter J., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1680-

Miller, Craig E.

Inflation Concept Development for Inflatable Lunar
Structures, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p171-182
see Hines, James M., AS Apr. 92, p248-256

Miller, David S.
Recycled Materials for Port Construction, (Ports '92, David Torseth, ed., 1992), p815-825

Miller, David W.
Principles of Ground-Water Protection, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p86-91

Miller, Gerald E. A Multiple Disk Centrifugal Pump as an Artifical Ventri-cle, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Amrita Sidhu, p976-979

Miller, Gregory R.
see Palmer, Richard N., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p364-367

Miller, Ian

A New Methodology for Repository Site Suitability Evaluation, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Richard Kossik and Mark Cunnane, p494-501

see Kossik, Richard, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1786-1793

Miller, Jerry L.
see Landin, Mary C., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p439-444

Miller, Mark S. see Shipley, Derek E., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1765-

Miller, Martin

see Borgman, Leon, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p42-65

Miller, R. A.

Nondestructive and Destructive Testing of a Three Span Skewed R. C. Slab Bridge, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with A. E. Aktan and B. M. Shahrooz, p150-161

Miller, Robert E. see Yuan, Fuh-Gwo, EM Feb. 92, p312-328

Miller, Russell J.

see Pereira, Paulo Roberto, (Engineering, Construction,
and Operations in Space III, Willy Z. Sadeh, ed.,
Stein Sture, ed. and Russell J. Miller, ed., 1992),
p1195-1208

see Sadeh, Willy Z., ed., Engineering, Construction, and
Operations in Space III

Miller, S. Paul

Muler, S. Paul
Contaminant Groundwater Interception—RMA, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with William L. Murphy, pi 171-1176

see Comes, Gregory D., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1177

Miller, Scott M. see Spanos, Pol D., (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p192-195

Miller, Terry L.

Estimation of Travel Related Inputs to Air Quality Models, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), with Arun Chatterjee, Jerry Everett and Cindy McIlvaine, p100-125

Miller, Vincent G.

Replacement of a Deteriorated Steel Sheet Pile Bulkhead, (Parts '92, David Torseth, ed., 1992), with Vladimir Ostrov, p826-835

Millet, Richard A.

Stabilization of Tablachaca Dam Landslide, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Gil M. Lawton, Pedro C. Repetto and Vinod K. Garga, p1365-1381

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Mills, W. Carlisle

Retention Parameter Estimates for Curve Number Run-off Procedure, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Eng-man, ed., 1992), with Adrian W. Thomas, Anthony L. Dillard and Willard M. Snyder, p372-377

Milne, G. D. see Stanley, S. J., CR June 92, p58-72

Milnes, R. D.

Soft Touch People Mover Central Control, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), with R. S. Fahringer and J. B. Bojarski, p199-206

Miloradov, M.

Planning and Management of Water-Resource Systems in Developing Countries, WR Nov/Dec. 92, p603-619

see Balasundaram, V., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p567-574

Utilization of On-Site Resources for Regenerative Life Support Systems at a Lunar Outpost, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with D. C. Golden and D. L. Henninger, p1709-

Mion, Roy L. disc. (of Building Better Bridges: Concrete Vs. Steel, by Clifford L. Freyermuth and Andy Johnson, CE July 92, p66-71), CE Dec. 92, p36,38

Mirfendereski, Dariush
Random Response of Multicrystalline Structures, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Armen Der Kiureghian. p800-803

Statistical Analysis of Slender Composite Beam-Column Strength, with B. W. Skrabek, ST May 92, p1312-1332

Mishra, B.

Production of Oxygen by Electro-Reduction of Lunar Ores, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with D. L. Olson, J. J. Moore and W. A. Averlil, p666-677

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Misra, Rajeev

Transients in Canal Network, with K. Sridharan and M. S. Mohan Kumar, IR Sept./Oct. 92, p690-707

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Mitchell, J. S.
see Hsu, T. M., (Civil Engineering in the Oceans V,
Robert T. Hudspeth, ed., 1992), p733-749

Robert T. Fluospean, Co., Mitchell, James K. Kettleman Hills Waste Landfill Slope Failure. I: Liner-System Properties, with Raymond B. Seed and H. Bolton Seed, GT Apr. 90, p647-645
disc: M. K. Yegian and A. M. Lahlaf, GT Apr. 92, p643-645
clo: GT Apr. 92, p645
The Role of Soil Modification in Environmental Engineering Applications, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Wade A. Van Court p110-143

see Mitchell, Richard A., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1152-1187

Mitchell, P. H.

see Winandy, J. E., MT Aug. 92, p240-251

Mitchell, Philip J. see Ngo, Chien D., CE Aug. 92, p45-47

Mitchell, Richard A.

Mitchell, Richard A. Stability and Closure Design for a Landfill on Soft Clay and Peat, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Sybil E. Hatch and Ronaid A. Siegel, p685-704 Stability Evaluation of Waste Landfills, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with James K. Mitchell, p1152-1187

Mitchell, S. J. see Schneider, K. J., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1159-1165

Miti-Kavuma, M. see Robinson, D. N., EM Aug. 92, p1646-1660

Mitropoulos, Panagiotis see De La Garza, Jesus M., CO Sept. 92, p435-453

Miyasaka, Gohichi

Mysasaka, Gosical jet Grouting for a Self-standing Wall, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Yutaka Sasaki, Toshiaki Nagata, Missuhiro Shibazaki, Masahiro Iji and Masami Yoda, p144-155

Mizell, Steve A. Quantity and Quality of Nuisance Water in the Las Vegas Valley, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Richard H. French, p128-132

Mizuno, Eiji
Compressive Softening Model for Concrete, with Shigemitsu Hatanaka, EM Aug. 92, p1546-1563

Mizyed, Numan R.

Operation of Large Multireservoir Systems Using Opti-mal-Control Theory, with Jim C. Loftis and Darrell G. Fontane, WR July/Aug. 92, p371-387

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Mait, 1. see Ballivy, G., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), 588-600
see Ballivy, C., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625

arbé, D. E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p791-796 Mo, X. see Barbé, D. E.,

Moan, T. see Olufsen, A., ST Oct. 92, p2699-2715

Mobasher, B.
Fiber Suppressed Localization in Tension, (Engineering Mechanics, Loren D. Lutes, ed. and John M.
Niedzwecki, ed., 1992), with S. P. Shah, p868-871

Mobasher-Fard, Hamid see Zielinski, Zenon A., ST Oct. 92, p2911-2926

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see Cooper, J. R., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p237-242

Mock, David W.

see Stehmeyer, Edward H., Jr., (Ports '92, David Torseth, ed., 1992), p644-656

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Modena, Claudio see Bernardini, Alberto, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p25-28

Modesitt, Kenneth L.
Basic Principles and Techniques in Knowledge Acquisition, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p11-49

Moehle, Jack P.

see Wallace, John W., ST June 92, p1625-1644

Moeller, Mark

Advances in Ground Operations for the Next Generation Space Launch Vehicle Programs, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Shelly Ewing, p1557-1566

Mogharabi, Abi see Sutaria, T. C., (Site Impact Traffic Assessment: Prob-lems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.223-

Mohamed, Abdel-Mohsen O.
Mitigation of Acidic Mine Drainage: Engineered Soil Barriers for Reactive Tailings. (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Raymond N. Yong and Boon K. Tan, p457-462

Mohamed, Gouda A.

see Akl, Adel Y., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
p276-279

Mohamedzein, Yahia E.-A.
Predicting the Performance Limits of Soil-Culvert Systems, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p908-911

Jonn M. Niedzwecki, ed., 1992), p908-911

Mohammadi, Jamshid

Statistical Evaluation of Truck Overloads, with Nadir
Shah, TE Sept./Oct. 92, p651-665

Stochastic Modeling of Short Fiber Reinforced Composites—A Review, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992),
with Artur S. Kurzydlo, p479-482
see Kritzler, Robert W., (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p156-159

Mohamoud, Y.

Optimum Center-Pivot Irrigation System Design with Tillage Effects, with Thomas R. McCarty and Loyd K. Ewing, IR Mar./Apr. 92, p291-305 err: IR Sept./Oct. 92, p840

Mohan, S.

Multiobjective Analysis of Multireservoir System, with Diwakar M. Raipure, WR July/Aug. 92, p356-370 see Raman, H., IR Mar./Apr. 92, p229-241

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see Balog, George G., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p256-261

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Controlling Nitrogen in Coastal Waters, with Susan Beede, Joseph Costa and Bruce Rosinoff, CE Mar. 92, p56-59

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Analysis of Stability of L'Ambiance Plaza Lift-Slab Towers, with Roy Hooley, John D. Osteraas and Brant J.

Lahnert, CF Nov. 92, p232-245

Moncouyoux, J. P.
French High-Level Waste Management Research and Development Program, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with C. G. Sombret, p2406-2409

Monforton, Gerard R. see Adluri, Seshu Madhava Rao, ST July 92, p1920-1936

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Moatana, Carl J.
see Khondker, Sufian A., (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p912-918

Montbrun-Di Filippo, Jenny see Valdés, Juan B., WR July/Aug. 92, p423-444

Monteith, Hugh
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Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p305-310

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F. Pierce Linaweaver, ed., 1992), p287-290
see Burns, Bruce B., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p30-35

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Nonlinear Cyclic Behavior of Reinforcing Bars Including
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see Chan, Kadett, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p2044-2055
see Wade, James, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p427-440

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Moore, Gary T.

Lunar Base Requirements for Human Habitability, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Kerry L. Paruleski, Janis
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Moore, Gordon H.
Offshore Challenge, with Juan J. Campo, CE Oct. 92, p48-51

disc. (of Local Buckling of Tubes in Elastic Continuum, by James A. Cheney, EM Jan. 91, p205-216), EM June 92, p1277-1278

Moore, J. J.

Combustion Synthesis of Advanced Materials, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with H. J. Feng, N. Perkins and D. W. Readey, p1389-1400

see Mishra, B., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p666-677

Moore, Jon T.

Environmental Impact Analysis of Coastal Projects, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p952-957

Moore, Larry W.

see Smith, Roger H., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p.200-207

Moore, Nathan R.

An Analysis of Human Performance in Simulated Par-tial-Gravity Environments, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with David J. Gutierrez, p2282-2292

Interpolation Functions for Use with ORIGEN-2 Data, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p77-81

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Moore, William W.

disc. (of Tort Reform and Design Professional, by Dennis R. Schapker, El July 90, p258-265), El July 92, p318-319

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Path-Finder: Al-Based Path Planning System, with A. B. Cleveland, Jr., Y. J. Beliveau, V. D. Fransisco and S. S. Dixit, CP Apr. 92, p114-128

Morad, Ayman A.

Intelligent Retrieval System for Conditions of Contract Documents in Construction, (Computing in Civil Engi-neering and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Luis Arditi Rocha, p737-745

A Knowledge-based System for Duration Estimating and Crew Selection for Construction Activities, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Gerardo D. Diaz, p190-198

see Thabet, Walid Y., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p727-736

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Dimensional Analysis of Buckling of Stiffened Composite Shells, with I. D. Parsons, EM Mar. 92, p557-574

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Mobile-Bed Physical Model Tests for the 1992 Olympic Harbour, (Civil Engineering in the Oceans V, Robert T, Hudspeth, ed., 1992), with C. Tamayo and J. Losada, p840-849

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uador's Rural Cadasters and Land Titling Project (CA-TIR): Technical Process, SU Nov. 92, p118-129

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Permanent Excavation Support and Underpinning in Sands: A Case History, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Lawrence F. Johnsen and Franklin M. Grynkewicz, p778-790

Renson, Allen, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1917-1920

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Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p2188-

Morgenstern, Norbert R. The Evaluation of Slope Stability—A 25 Year Perspetive, (Stability and Performance of Slopes and Embanments II, Raymond B. Seed, ed. and Ross V. Boulanger, ed., 1992, pl-26

Morgenthaler, G. W. see Smith, G. J., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 370-1378

Morgenthaler, George W.
Lunar Base Pressure, O.; Fraction, and ExtraHabitat Activity Suit Design, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Edward G.
Barrett, Dale A. Fester and Carolyn G. Cooley, p1720-1727

Optimizing Launch-on-Time Probability, AS July 92, p369-386 p307-360
see Helleckson, Brent, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p213-223

see Jolly, Steve, (Engineering, Construction, and Opera-tions in Space III, Will Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992, p987-998 see Wade, James, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p427-440

Mori, Akira Some Factors Related to Injected Shape in Grouting, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Masahito Tamura, Hideaki Shibata and Hideo Hayashi, p313-324 see Ichihashi, Yoshiomi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p182-193

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disc. (of Finite Element Simulation of Behavior of Later-ally Loaded Piles in Permafrost, by A. Foriero and B. Ladanyi, GT Feb. 90, p266-284), GT Jan. 92, p171-173

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Morley, R.

owe, B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013

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Morrall, John

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Morris, D. V.

Resonant Column Testing of Dynamic Rock Properties, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. G. Delphia, p527-

Morris, Derek V.

Pipeline Storm Behavior on Clay Soils, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Tony S. Yen, Wayne A. Dunlap and James R. Hale, p560-570

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Morria, Gregory L.

BRASS Modeling of Loiza Reservoir, Puerto Rico, for Sediment Management Operations, (Pater Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Raul Colón, Robert Laura and G. T. Anderson, p837-842
HEC-6 Modeling of Sediment Management in Loiza Reservoir, Puerto Rico, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Guangdou Hu, p630-635
see Fan, Jiahua, HY Mar. 92, p370-384
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Morris, Nicholas F.

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Morris, Richard V.
see Allen, Cartion C., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p629-

see Allen, Carlton C., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1209-

Morrison, Denby G.
see Marshall, Peter W., (Civil Engineering in the Oceans
V, Robert T. Hudspeth, ed., 1992), p258-272

Morrison, Denby Grey
Dynamic Design of Deepwater Bottom-Founded Towers,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), p850-889

Morroni, Loretta A. see Nowak, Paul S., AS July 92, p311-322

Morrow, David D.

Evaluating the Effectiveness of Transportation Control Measures for San Luis Obispo County, California, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p195-210

Morrow, J. P.

see Ross, T. J., (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p535-

Moriow, Jeff

see Peppin, Scott, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1035-1047

Morse, B.

Modeling Channel Bed Transients Using Explicit F-D
Schemes, with R. D. Townsend, HY Nov. 90, p1345-

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Mosallam, Ayman S. Short-Term Behavior of Pultruded Fiber-Reinforced Plastic Frame, with Lawrence C. Bank, ST July 92,

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Mosethi, Osama Automation of Concrete Slab-on-Grade Construction, with Paul Fazio and Stanley Hason, CO Dec. 92, p731-748

see Li, Duan, (Risk-Based Decision Making in Water Re-sources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283

er, David A.

Moser, David A.
see Haimes, Yacov Y., ed., Risk-Based Decision Making
in Water Resources V.
see Taylor, Daniel B., (Risk-Based Decision Making in
Water Resources V. Yacov Y. Haimes, ed., David
A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992),
p148-173

Moser, Michael A. Stochastic Response of a Caster-Mounted System, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Wilfred D. Iwan, p316-

Moses, Fred
see Ghosn, Michel, (Probabilistic Mechanics and Structural
and Geolechnical Reliability, Y. K. Lin, ed.,
1992), p344-347
see Liu, Yingwei, (Probabilistic Mechanics and Structural
and Geotechnical Reliability, Y. K. Lin, ed., 1992),
112-115

Verma, Dhirendra, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p433-436

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Moss, Melvin L. see Dasgupta, Gautam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975

see McAlarney, Mona E., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p960-963

mosaman, Deborah J.

Field Analysis of Contaminated Sediments by Immunoassay, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Cynthia J. Baker, Robin D. Rodriguez and Thomas L. Feldbush, p110-115 see Baker, Cynthia J., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p410-415

Moss-Salentija, Letty see Dasgupta, Gautam, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p972-975 see McAlarney, Mona E., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p960-963

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Mostaghimi, Saied see Tchaou, Marcel K., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p341-346

sed, F.

see Jiang. Clarence, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p426-433

Motazed, Ben
see Shaffer, Gary, (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p880-887

1972), post-eor
Motz, Louis H.
Drawdowns for Constant-Discharge One-Dimensional
Leaky Aquifer, IR May/June 90, p456-461
dise: Mohammad Akram Gill, IR Mar/Apr. 92,
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clo: IR Mar/Apr. 92, p333
Drawdowns for Nonleaky Aquifer Flow with Storage in
Finite-Width Sink, IR July/Aug. 92, p645-651

Use of Groundwater Models to Simulate Remediation, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Paul A Chadik, Ben L. Koopman, Kirk Hatfield, Richard L. Hutton, Glenn A. Tootle and Randall W. Watts, p281-

Moubayed, W. I. Second-Order Hydrodynamic Interactions Between a Pair of Vertical Cylinders in Irregular Waves, (Civil Engi-neering in the Oceans V, Robert T. Hudspeth, ed., 1992), with A. N. Williams, p188-202

Moudud, Abdul
see Sharma, Sunii, (Stability and Performance of Slopes
and Embankments II. Raymond B. Seed, ed. and
Ross W. Boulanger, ed., 1992), p506-520

Moughton, David W. see Fiuzat, Abbas A., HY May 92, p786-791

Mousset-Jones, P.
see Danko, G., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p790-798

Moutal, Harvey P.
GIS: New York's Pipe Dream, with David R. Bowen and
Wendy Dorf, CE Feb. 92, p66-67

Moutzouris, C. I.
Observation of the Post-Construction Performance of a System of Groins along an Eroding Beach, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p303-319

Mozhi, T. A. see Duffy, M. A., (High Level Radioactive Waste Management Ment., High Level Radioactive Waste Management Program Committee, 1992), p1867-1874

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Muccino, Julia C.
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Muckleroy, J. Gage see Bassett, Britt D., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23

Mudgal, B.
disc. (of Head Losses in Storm Sewer Manholes: Submerged Jet Theory, by Flemming Bo Pedersen and Ole
Mark, HY Nov. 90, p1317-1328) with B. S. Pani, HY
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see Audibert, J. M. E., WW Jan./Feb. 92, p32-42

Mühlhaus, H. -B.

see de Borst, R., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p776-779

Muhunthan, B.

Mutuhannan, Mathematical Characterization of Fabric and Its Use in Mechanics of Geomaterials, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. L. Chameau, p725-728

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Mukherjee, D. Stochastic Model for Soil Moisture Deficit in Irrigated Lands, with N. T. Kottegoda, IR July/Aug. 92, p527-

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Muleshkov, Angel see Banerjee, Sunirmal, EM Mar. 92, p525-539

Mulla Saleh, Abdul R.

Multa Salett, Adoub R.
Leakage Mechanism Through Double Liner Systems, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p192-200

Mullen, Robert L. see Acosta, J. Adolfo, (disc), TE May/June 90, p287-298

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see Armacost, Robert L., (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p48-57

Mäller, Agmar Water Quality Modelling: Prediction of the Transport of Water Constituents in the Weser Estuary (Germany), (Estuarine and Coastal Modeling, Malcolm L. Spauld-ing, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Iris Grabemann and Bernhard Kunze, p405-417

see Kellett, Ronald, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p101-110

Müller, Horst disc. (of Professionalism and Marketing of Civil Engi-neering Profession, by John A. Alexander, El Jan. 91, p10-20), El July 92, p327-329

Muller, John F.

Prestressed-Concrete Railway-Bridge Live-Load Strains, with Peter F. Dux, ST Feb. 92, p359-376

Mulvihill, Michael E.
Revised Hydraulic Design of the Los Angeles County
Flood Control System, (Hydraulic Engineering: Saving
a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992),
with Scott E. Stonestreet, p612-617

Munce, Barry R.

Sydney Airport International Terminal Development, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p258-271

Munger, Dale F. see Edris, Earl V., Jr., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1066

Munley, Eric see Bank, Lawrence C., (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p618-631

Munster, C. L.
Aldicarb Transport in the Coastal Plain of N. C., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with R. W. Skages, J. E. Parsons, R. O. Evans, J. W. Gilliam and E. W. Harmsen, p419-424

Murakami, H.

Numerical Implementation of Nonlocal Elastoplastic Damage Theory, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with H. E. Read, p248-251

see Hassanzadeh, S., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and leff R. Wright, ed., 1992), p762-769

Muralidharan, Raman see Krauthammer, Theodor, CP Oct. 92, p417-434

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Mursta, M. see Shinozuka, M., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballan-tyne, ed., 1992), p43-57

Murfee, James G. see Dass, William C., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p196-212

Murff, J. D. see Randolph, M. F., GT May 92, p743-759

Murff, James D.
see Maller, Andrew V., (Civil Engineering in the Oceans
V, Robert T. Hudspeth, ed., 1992), p571-584

Murga, Mikel
Traffic Impact Study for a Regional Shopping Center at a
Basque City. A European View, (Site Impact Traffic
Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed.,
1992), p84-88

Murotsu, Yoshisada
Optimal Configuration for Fiber Reinforced Composites
under Uncertainties of Material Properties and Loadings, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with
Mitsunori Miki and Shaowen Shao, p547-550

Murphy, Susan C. see Davidson, Roger A., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1567-1578

Murphy, William L. see Miller, S. Paul, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1171-1176

Murphy, William M.
see Codell, Richard B., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1959-1965

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Murray, E. J.

see Geddes, James D., GT May 91, p810-814

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Murrell, M.

see Crowe, B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013

Murthy, A. S. Narasimha
Traffic Data Collection: What Really Needs to be Done?,
(Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and
T. C. Sutaria, ed., 1992), p1-5

Murthy, B. R. S. see Nagaraj, T. S., GT Jan. 90, p105-118

Murthy, B. R. Srinivasa Revised Cam-Clay Model, with A. Vatsala and T. S. Nagaraj, GT June 91, p851-871 disc: Jian Chu, GT Aug, 92, p1289-1290 clo: GT Aug, 92, p1290-1291 see Sridharan, A., GT Aug, 91, p1174-1190

Murthy, C. R.

see Stronach, J. A., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p759-770

Murthy, D. S. Ramachandra

Structural Efficiency of Internally Ring-Stiffened Steel
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Murty, T. S. see Stronach, J. A., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p759-770 see Venkatesh, S. (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p108-113

Murty, V. V. N. see Azhar, Aftab H., IR Jan./Feb. 92, p36-55

Pre-Envelope Covariance Differential Equations, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), p180-183

Mushtaq, Hasa

Mushtsq, Hasan
Optimization Model for Operation of Recharge Basins,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamuz, ed., 1992), with Larry W. Mays and
Kevin E. Lansey, p305-309

Musil, S. A. see Hart, W. E., IR Nov./Dec. 92, p971-976

Muslin, Dan see Bottin, Robert R., Jr., (Ports '92, David Torseth, ed., 1992), p768-776

Mussler, Robert M.

Negotiating the Voluntary Siting of Nuclear Waste Facilities—An Impossible Mission Made Possible, High-Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 10021—1555.1656. 1992), p1565-1566

Mustafa, Aziz

Ground Improvement of Rubbish Dump Over Reclaimed Tin Mine, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Mohd Raihan Taha, p1324-1331

Mustafa, Mohamad
Inductive Learning of Wind Bracing Design for Tall
Buildings, (Knowledge Acquisition in Civil Engineering,
Tomasz Arciszewski, ed. and Lewis A. Rossman, ed.,
1992), with Tomasz Arciszewski, p190-203

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Msyibi, Suley A.

Planning Water Supply and Sanitation Projects in Developing Countries, WR July/Aug. 92, p351-355

Myczkowski, Jacek

myczkowaki, Jacek
Seismic Wave Propagation by Finite Differences on the
Connection Machine, (Engineering Mechanics, Loren
D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Myer, Larry see Majer, Ernest, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), pl111-1121

Mysore, R. K.

Constitutive Equation for Granular Material by Hypoelasticity, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with W. E. Falby, p733-736

Naman, Antoine E.
Fiber Pullout and Bond Slip. I: Analytical Study, with George G. Namur, Jamil M. Alwan and Husam S. Najm, ST Sept. 91, p2769-2790
err: ST July 92, p1985
err: ST Sept. 92, p2644
disc. (of Direct Analysis of Prestressed Concrete Members, by A. S. Prasada Rao, ST Dec. 90, p3432-3447), ST June 92, p1718
see Hamza, Ali M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p996-999

Nadeau, M. see Ballivy, G., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p614-625

Nadel, Norman A

Nadel, Norman A.

Tunneling in the Urban Environment, (Excavation and
Support for the Urban Infrastructure, T. D. O'Rourke,
ed. and A. G. Hobelman, ed., 1992), p172-180
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err: CE July 91, p36
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Nader, Blair A. Isssues in Developing Control Zones for International Space Operations, with Kumar Krishen, AS Oct. 92, p.387-404

Nagaraj, T. S.

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Nagarajaiah, Satish

Experimental Study of Sliding Isolated Structures with Uplift Restraint, with Andrei M. Reinhorn and Michalakis C. Constantinou, ST June 92, p1666-1682

Pseudoforce Method of Solution for Highly Nonlinear Systems, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Au-drei Reinhorn, p913-920

Nagata, Toshiaki see Miyasaka, Gohichi, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p144-155

Naghash, M.
Numerical Prediction of Aeration in Hydroturbine Draft
Tubes, (Hydraulic Engineering: Saving a Threatened
Resource—In Search of Solutions, Marshall Jennings,
ed. and Nani G. Bhowmik, ed., 1992), with C. Bohac, p293-298

Naghél, A. K. Bending of Rectangular Cross-Section Cantilever with Cylindrical Cutouts, EM Apr. 92, p831-842

Nais, I arus R.
Use of the Break-Off Method for the Evaluation of High Performance Concrete, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Amr S. Hassaballah, p92-106 see Zachar, John, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p107-115

Nairn, Robert B.
Numerical Beach Profile Modelling for Beachfill Projects,
(Coastal Engineering Practice '92, Steven A. Hughes,
ed., 1992), with Keith J. Riddell, p12-28

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Application of NMR to Rotating Granular Flow, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with E. K. Jeong, p644-647

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Nakato, Tatsuaki
Vortex Suppression in Wet-Pit Pump Intakes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p478-481
see Khondker, Sufian A., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p249-256

Nakhimovsky, Gregory PREPS: Analysis of Pipe Supports and Other Structures on the PC-386. (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Charles E. Doherty, p543-550

Nakhla, G. F. Modeling of Toxic Wastewater Treatment by Expanded-Bed Anaerobic GAC Reactors, with M. T. Suidan, EE July/Aug. 92, p495-512

Nam, C. H.
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Namba, Harvyuki
Tripod Crane Concept for Lunar Surface Construction,
[Engineering, Construction, and Operations in Space
111, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Martin M. Mikulas, Jr., p284295

see Argiris, Leo, CE Feb. 92, p48-51

Namial, Ahmad Finite Element-Based Flutter Analysis of Cable-Suspended Bridges, with Pedro Albrecht and Harold Bosch, ST June 92, p1509-1526

Namini, Ahmad H. see Fahmy, Mohamed W., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p457-460

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July 92, p284-293
Hybrid (FRP-Steel) Reinforcement for Concrete Structures, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed. 1992),
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Napier, B. A

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see Stumpf, Annette L., (Computing in Civil Engineering
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Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p950-958

Naqvi, S.

see Grondin, L., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1209-1215

see Johansen, K., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p481-488

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A Preliminary Report on OCR Problems in LSS Document Conversion, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. Kanal and S. V. Rice, p.2106-2108

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Climate Change and Water Management Flexibility, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p517-

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Yu, Baoqing, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p916-919

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Natale, Charles J., Jr.
Seismic Survey Considerations in the Planning and Design of Dredging Projects for Marine Terminal Facilities, (Ports '92, David Torseth, ed., 1992), with Thaddeus A. Nowak, Jr. and Bruce A. Adams, p456-469

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Nathan, Mark P. Mass and Energy Tradeoffs of Axial Penetration Devices on Lunar Soil Simulant, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Frank Barnes, Hon-Yim Ko and Stein Sture, p441-457

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Articulating Block Mat Revetment for Whaler's Village,
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ed., 1992), with David G. Cannon, p268-284

Nathanson, Jerry disc. (of Principles of Holistic Medicine Applied to Infra-structure Maintenance: A Test Case, by Fred Catapano, CE Jan. 92, p68-69), CE Apr. 92, p32

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Damage, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. T. P. Yao,

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Nauman, Eric see Roy, R. Valéry, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p663-671

Naumov, V. E. Mechanics of Growing Deformable Solids: A Review, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p510-513

Nasta, Tjitte
Modeling Transport and Fate of Micropollutants in
Coastal Waters, (Estuarine and Coastal Modeling, Mai-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blum-berg, ed., Ralph Cheng, ed. and Craig Swanson, ed.,
1992), with Hans van Pagee and Mindert de Vries,
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Navayogarajah, N. Hierarchical Single-Surface Model for Static and Cyclic Behavior of Interfaces, with C. S. Desai and P. D. Kiousis, EM May 92, p990-1011

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Nazarian, S.

A New NDT Device for Comprehensive Pavement Maintenance (Theoretical Aspects), (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with M. Baker, p948-951

Pavement Instrumentation for Verifying Elastic Theory, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with E. Y. Chai and D. R. Alexander, p306-320

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Engman, ed., 1992), p547-552

Neale, Christopher M. U.
Applications of Remote Sensing to Irrigated Agriculture, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Richard H. Cuenca, p541-546

Irrigation and Drainage System As-Built Map Preparation Using Satellite Digital Imagery and a GIS, (Irrigation and Drainage: Saving a Threatenend Resource—In Search of Solutions, Ted Engman, ed., 1992), with Lymann S. Willardson, p311-316

see Ahmed, Rashid H., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p323-328

see Peralta, Richard C., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p305-310

Neary, Vincent S.

Neary, Vlacent S.
Design Guidelines for a Sedimentation Control System at
Open Channel Diversions, (Hydraulic Engineering:
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), with A. Jacob Odgaard, p198-203

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Facility Management System for Buildings, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with Robert Neathammer, p129-

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Czechoslovakian Bridge: A Firsthand Look (ltr), CE July 92, p36

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Nellsen, M. K.

Neusea, Nr. a. The Initiation of Bifurcations and Localization in Damaging Materials, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with H. L. Schreyer, p365-368

see Zuo, Q. H., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p151-154

System Concepts for a Series of Lunar Optical Telescopes, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Billy G. Davis and John D. Hilchey, p1809-1831

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Price Effects of Landfills on Residential Land Values, with John H. Genereux and Michelle Genereux, UP Dec. 92, p128-137

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Functional Analysis in Continuum and Structural Me-chanics, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p514-518

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Analysis of Dredged Material Deposition Patterns, (Ports '92, David Torseth, ed., 1992), with Billy H. Johnson, p470-479

Nelson, James

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see Jones, Norman L., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p719-726

Nelson, John D.

see Shaikh, Aladdin, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), 664-653

Nelson, Louis S.

Baggage System Implementation at DIA, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p235-238

Nelson, Mark E.

Appropriate Technology for Flood Warnings, CE June 92, p64-66

Retrospect and Prospect: Micromechanics, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p632

disc. (of Micromechanical Model to Predict Sand Densification by Cyclic Straining, by Ricardo Dobry and Emmanuel Petrakis, EM Feb. 90, p288-308), EM Mar. 92, p646-647

see Romero, L., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p954-959

Design and Construction of Shinnecock Inlet, New York, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Lynn Marie Bocamazo, p554-570

see Chu, Yen-hsi, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p571-582

Ness, Robert O., Jr.

Ness, Robert O., Jr.
Hydrogen Reduction of Lunar Soil and Simulants, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Laura L. Sharp, David W. Brekke, Christian W. Knudsen and Michael A. Gibson, p617-628

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see Senneset, Kaare, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p889-901

see Weiner, R. F., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1205-1208

an, Shleme P.

Neuman, Snieman, Stafety Assessment Models as a Process of Scientific and Public Confidence Building, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992). p1404-1413

Neumann, Lance see McNeil, Sue, TE July/Aug. 92, p477-495

New, Barry M.

Construction Induced Vibration in Urban Environments, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992),

Newbury, Claudia M.

Lanagement of Scientific and Engineering Data Collected During Site Characterization of a Potential High-Level Waste Repository, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Gail W. Heitland, p2093-2097

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Newsom, Donald E.
Evacuation Modeling Near a Chemical Stockpile Site,
(Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and
T. C. Sutaria, ed., 1992), with Marc A. Madore and
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Roll-Waves on a Non-Newtonian Mud Layer, (Engineer ing Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Chiang C. Mei, p892-895

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Dual-System Cleanup, with Philip J. Mitchell, John T. Su and Gary M. Carlton, CE Aug. 92, p45-47

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Nguyea, T. D. see Padmanabhan, M., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), p628-653

Nguyen, Thang D. Vibration of Beams and Trashracks in Parallel and In-clined Flows, with Eduard Naudascher, HY Aug. 91, p1036-1076

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clo: HY Oct. 92, p1460-1461

Nicholas, James C.
The Use of Road Impact Fees in the United States, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p164-169
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see Nelson, Arthur C., UP June 92, p45-58
see Nelson, Arthur C., UP June 92, p59-64

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Gravity-Driven Fingering in Unsaturated Fractures, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Frogram Committee, 1992), with R. J. Glass and H. A. Nguyen, p321-331

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Backfill-Stiffened Foundation Wall Construction, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p286-295
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Construction of Grout-Impregnated Fabric-Reinforced Pipes, CO June 92, p283-302

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Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p468-473

Nicholson, Peter J.
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opportunities and Constraints for the Innovative Geo-technical Contractor, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), with Donald A. Bruce, p46-64

Nicholson, Thomas J.
Nicholson, Thomas J.
Validation Issues Associated with Performance Assessment Modeling Activities for High-Level Radioactive Waste Repositories, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Charles F. Voss and Johan Andersson, p1437-1441

Nickerson, Robert disc. (of Building Better Bridges: Concrete Vs. Steel, by Clifford L. Freyermuth and Andy Johnson, CE July 92, p66-71), CE Dec. 92, p34-36

Nieber, John L.

Evaluation of Soil Water Sensors in Frozen Soils, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with John M. Baker and Egbert J. A. Spaans, p168-181

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Niedzielski-Eichner, Phillip A.

Niedzielski-Eichner, Phillip A. Nuclear Waste Repository Program Oversight: Strategies of the Situs Jurisdiction, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Elgie Holstein, p1927-1937

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Design of Tension Leg Platforms: A Knowledge Based
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T. Hudspeth, ed., 1992), with Oriol R. Rijken, p.288-

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see Lutes, Loren D., ed., Engineering Mechanics

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Nitao, John J.

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The Implications of Episodic Nonequilibrium Fracture-Matrix Flow on Site Suitability and Total System Performance, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Thomas A. Buscheck and Dwayne A. Chesnut, p279-296

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Phased Assembly of a European Space Station, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Robin C. Huttenbach, p850-861

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Design of Marina Replacement Facilities, (Ports '92, David Torseth, ed., 1992), with Scott M. Noble, p275-

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Nogami, Toyoaki
Dynamic Response Analysis of Pile Foundations by
Using Variational Calculus, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), with Jian-Xiong Zhu and Takayoshi Ito, p588-

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First and Second Order Dynamic Subgrade Models for Soil-Pile Interaction Analysis, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with Jiang-Xiong Zhu and Takayoshi Ito, pl 87-206
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Noor, Ahmed K.
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Waters, Jr., AS July 92, p347-368
Reduced Basis Technique for Nonlinear Vibrations of
Composite Panels, Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), with C.
M. Andersen and Jeanne M. Peters, p880-883
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Composite Panels, Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), with
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EM Apr. 92, p683-701

Nooran, Iraj
Deformation of Fill Slopes Caused by Wetting, (Stability
and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992),
with Joel A. Sweet and Ian M. Smith, p1244-1257
Variability in Compaction Control, GT July 90, p1132-

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Norgaard, Erlk New Cruise Terminal for San Francisco, (Ports '92, David Torseth, ed., 1992), p58-71

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North, Ronald M.

Session Summary—Risk Associated With Climate Change, (Risk-Based Decision Making in Water Re-sources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p343-345

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Spent Fuel Characteristics Provided by the CDB—An Update, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. Salmon, T. D. Welch, W. J. Reich and R. S. Moore, p122-130

see Welch, Tim D., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p72-76

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An Operational Evaluation Process for Long-Duration Mission Habitats in Space, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with E. Raffner and D. Antonelli, p1579-1590

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An Analysis of an Inflatable Module for Planetary Surfac-An Analysis of an Inflatable Module for Planetary Surfaces. (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Willy Z. Sadeh and Marvin E. Criswell, p78-88
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Are Existing Traffic Methodologies Realistic?, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Pasawell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), 9211-216

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Session Summary—Risk Communication and Perception, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p348-349

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O'Connor, Robert E.

Responding to Public Opinion About Cumulative Long-Term Risks: Analysis and Communication of Risks from Climate Change and Hazardous Waste Sites, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), with Richard J. Bord, p67-77

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Knowledge-Based Simulation of Construction Plans, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Iris D. Tommelein and Robert I. Carr, p1042-1049

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Highly Accurate Adaptive hp-Methods for Linear Elastos-tatics, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p628-631

Solim M. Nicelwecki, ed., 1992.), po2e-031

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see You, Kwang-W., (Estuarine and Coastal Modeling,
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A Primer for the Analysis of Composite Beams, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with M. U. Hosain and Jianing Ju, p1212-1219

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Nondestructive Crack Identification by Acoustic Emission Analysis and Ultrasonic Frequency Response, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with Yasunori Sakata, p171-181

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Urban Water Management in the 21st Century, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p150-160

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Orderview of the Radioactive Waste Management Programme of the OECD/NEA, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p52-56

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Experience with Beach Fill Equilibration and Recommended Design Guidelines, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p45-59

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Osson, Larry D.
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Ong, Say Kee

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Barthquake Countermeasures for Lifelines in the Central and Eastern United States, (Lifeline Earthquake Engi-neering in the Central and Eastern U.S., Donald B. Bal-lantyne, ed., 1992), p168-191

Excavation and Support for the Urban Infrastructure, with A. G. Hobelman, ed., 1992, 0-87262-906-6, 272pp.

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Basic Planning and Design of a Water Utility Information System, (Environmental Engineering: Saving a Threat-ened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Bryan Coulbeck, Sergio T. Coelho and Helena Alegre, p340-345

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Use of X-Ray Computed Tomography in the Study of Marine Sediments, Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Aubrey L. Anderson, John N. Leonard, William R. Bryant and Carl M. Edwards, p968-982

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North Central Texas Municipalities Address the NPDES
Stormwater Regulations Through Regional Coordination, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), with Alan H. Plummer and Robert W. Brashear, p62-63

Oswalt, Noel R.
Overtopping Protection Alternatives for Dams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1210-1215

see de S. Pinto, N. L., (disc), HY June 90, p765-782

Otani, Jun see Nogami, Toyoaki, GT Jan. 92, p89-106

See Padmanabhan, M., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p628-633

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Oury, Robert
Mixing and Delivery of Roller Compacted Concrete,
(Roller Compacted Concrete III, Kenneth D. Hansen,
ed. and Francis G. McLean, ed., 1992), with Ernest
Schrader, p242-257

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Owyang, C.

Damage Assessment in Concrete Using Acoustic Emission, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with E. Landis and S. P. Shah, pl 3-24

Ouyang, Chengsheng see Tang, Tianxi, ST Nov. 92, p3169-3185

Oweis, Issa S.
Piles Over Problems Sites, with Edward M. Zamiskie, Jr.,
CE Apr. 92, p62-64

CE Apr. 92, po2-04

Owen, Thomas E.

Geoelectrical Tomography: Model Studies Related to Nuclear Waste Site Characterization, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Vernon R. Sturdivant, p304-307

A Wax-Coupled Borehole Seismic Detector for High-Resolution Measurements, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Jorge O. Parra, p535-538

Owens, Lawrence
Pilot-scale Anaerobic Biological Removal of Selenium
from Agricultural Drainage Water Using Sequencing
Batch Reactors, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F. Pierce
Linaweaver, ed., 1992), with Kenneth Johnson and Kapil Sabharwal, p445-450

Owens, Mariene
see Maddigan, Ruth, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1330-1335

Owrey, Kenneth
Design Concepts for a Lunar Electric Power System, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Herminio Abcede and Davy
Nyirenda, p774-785

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olt, Jolko

Microplane Model for Cyclic Triaxial Behavior of Concrete, with Zdeněk P. Bažant, EM July 92, p1365-1386 see Bažant, Zdeněk P., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p490-493 see Bažant, Zdeněk P., EM Mar. 92, p540-556

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Ozgur, Naci H.
see Yuan, Weibo, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), 0480-485

Port of Portland's Berth 601 Floating Dock, (Ports '92, David Torseth, ed., 1992), with Walter R. Haynes,

well, Rob

Site Impact Traffic Assessment: Problems and Solutions, with Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992, 0-87262-870-1, 236pp.

Paavola, Juha Flexural-Torsional Stability of Thin-Walled Columns, with Seppo Salonen, EM Dec. 92, p2384-2400

Pacheco, Benito M.

see Fujino, Yozo, EM Oct. 92, p2017-2030

Pacheco-Ceballos, Rani Bed-Load Coefficients, HY Oct. 92, p1436-1442

Packer, Jeffrey A.
disc. (of T-Joints in Rectangular Hollow Sections Subject
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J. Hancock, ST Aug. 91, p2258-2277) with Jaap Wardenier, ST Sept. 92, p2636-2638
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see Frater, George S., ST Oct. 92, p2804-2820

Padgett, Theodore G., Jr.
Manufactured Wood Joists—Noncollapse Failure, CF
Feb. 92, p58-64

Padmanahhan, M.
Flow Distribution in a Stacked Clarifier, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with T. D. Nguyen, J. Noreika, D. N. Brocard and R. Otoski, p628-633

Pack, James H.

Selection of Design/Build Proposal Using Fuzzy-Logic System, with Yong W. Lee and Thomas R. Napier, CO June 92, p303-317

Tazir, Zahra-El-Hayat, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p147-168

Lewis A. Nossam.

Paine, John N.

Addressing Bridge Scour When Funding Falls Short, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Robert J. Leedy, Jr. and James N. Wigfield, p.204-209

Channel Flow Algorithm in Newton-Raphson

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Pak, Ronald Y. S.

Experimental and Theoretical Dynamic Compliances of Foundations, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Bojan B. Guzina, p596-599

Pakulski, Dennis M.

Steam Injection System for Lunar Concrete, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Kenneth J. Knox, pl 347-1358

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Palassopoules, G. V. Response Variability of Structures Subjected to Bifurca-tion Buckling, EM June 92, p1164-1183

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Palazzetto, Anthony see Perry, Ronald, (Engineering, Construction, and Oper-ations in Space III, Willy Z. Sadeh, ed., Stein Sure, ed. and Russell J. Miller, ed., 1992), p1286-

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Paliwal, D. N. Hypar Shell on Pasternak Foundation, with S. N. Sinha and A. Ahmad, EM July 92, p1303-1316

Palmer, Carole Ecological Sustainable Development—A Place in the Sun for Nuclear Energy?, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1470-1477

Palmer, Richard N.
Knowledge Representation in Water Resource Management Using Prolog and Natural Language, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), with Lynn Spence, p144-

160
The Use of Computers as an Aid to Modular Learning in Civil Engineering, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Gregory R. Miller, p364-367 see Karpack, Larry M., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p144-149
see Keyes, Allison M., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p68-13
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Palmiter, T. V. see Joseph, I., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p911-916

Palo, Paul A.

Validation of the SEADYN90 Cable Simulation Model

Using a Three-Dimensional Cable Deployment Data

Set, (Civil Engineering in the Oceans V, Robert T.

Hudspeth, ed., 1992), with Linda C. Teragouchi and

Maureen T. Smith, p273-287

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Pamukcu, Sibel
Improvement of Fuel Oil Contaminated Soils by Additives, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Hazem Hijazi, p1285-1297

Activity of Biomass in RBC System Treating Pulp Industrial Wastewater, with L. Hartmann, EE Sept./Oct. 92, p744-754

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Pan, Tso-Chlea Field Load Test on Full-Scale Reinforced Concrete Frame, with Siu Tee Wong, Hee Kiat Cheong and Kok Wai Phang, CF Aug. 92, p137-150 Performance of Viaduct Girders under Static and Dy-namic Loads, with Hee Kiat Cheong, CF May 92, p96-

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Panarese, William C. Fiber: Good For the Concrete Diet?, CE May 92, p44-47 disc: David J. Akers, CE Oct. 92, p29,31 clo: CE Nov. 92, p32-33

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Pandey, Mahesh D. Mechanics of Shape Optimization in Plate Buckling, with Archibald N. Sherbourne, EM June 92, p1249-1266 see Sherbourne, Archibald N., EM Oct. 92, p2087-2103

Pandey, P. C. disc. (of Plates on Elastic Foundation, by David S. Chil-ton and Jerzy W. Wekezer, ST Nov. 90, p3236-3241), ST May 92, p1436-1437

Pandey, Ravi S.
Drawdown Solutions with Variable Drainable Porosity,
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Critical Reappraisal of Colloidal Activity of Clays, with
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Pane, Vincenzo disc. (of SOA: Large Strain Consolidation Predictions, by F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243) with Robert L. Schiffman and Robert E. Gibson, GT Jan. 92, p169-171

Pang, S. T.

Bernoulli Beams, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with T. -C. Tsao and L. A. Bergman, p820-823

Pani, B. S. see Mudgal, B., (disc), HY Nov. 90, p1317-1328

Pankratius, W.
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Panthaki, F. D.

see Mander, J. B., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p72-86

Panzeca, T. see Giambanco, F., EM June 92, p1083-1092

Papacostas, C. S. see Oloufa, Amr A., CP Jan. 92, p72-84

Papadakis, Constantine N.

A Novel University-Industry-Government Partnership, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Paul C. Claspy, Theo G. Keith and Michael J. Salkind, p2128-2135

Papadimitriou, K.
Nonstationary Response Characteristics of Linear MDOF Systems, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. L. Beck, p572-575

Papadopolis-Dezorzis, Aristotellis see Matsoukis, Panayis-Fokion, EM Aug. 92, p1526-1545

Papadopoulos, Basil P. Settlements of Shallow Foundations on Cohesionless Soils, GT Mar. 92, p377-393

Papados, Photios P.
Failure Prediction of Anisotropic Material, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Paul N. Roschke, p1012-

Papageorgiou, Apostolos S. Differential Motions in Sedimentary Valleys, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p400-403

Papageorgiou, M. see Messmer, A., WR Nov./Dec. 92, p585-602

Papanicolaou, Athanasios Ctitical Evaluation of Thickening Theories, (Hydraulic Engineering Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Panayiotis Diplas, p735-740

Papanicolnon, George see Kohler, Werner, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p381-383

Papazian, Edward Y.
see Sabanayagam, S., (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Paaswell, ed.,
Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992),
p148-153

Papia, Maurizio see La Mendola, Lidia, EM May 91, p954-973

The Importance of the Site for the Safety of a Repository for Spent Nuclear Fuel in Sweden, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2136-2144

Pardo, Juan Lezoya see Martín-Benito, José Marí Tarjuelo, IR Nov./Dec. 92, p895-913

Parent, William F. see Matheson, Gordon M., GT Dec. 89, p1699-1716

Parentela, Emelinda M.

see Souleyrette, Reginald R., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p52-56

Parfet, Todd C.
Using Simulation to Evaluate On-Orbit Construction Operations, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2338-2350

Parfitt, Kevin

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Sizing Up Release 12, CC Aug. 92, p1,4-7
see Lee, Joon Won, (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p959-966
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Paris, Anthony J.
Simple Cord Composites, with Ching-Chang Lin and George A. Costello, EM Sept. 92, p1939-1948

Park, Hyun-Soo see Choi, Jong-Won, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2278-2283

Park, Jac K.
see Sakti, Joni P., (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p201-207

Park, Je-Sec

ee Kim, Kwang W., (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p332-343

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Park, Sung Moo see Oehlers, Deric John, ST Aug. 92, p2004-2022

Park, Yong-Myung see Choi, Chang-Koon, EM Mar. 92, p462-480

Park, Young J. Equivalent Linearization for Seismic Responses. I: For-mulation and Error Analysis, EM Nov. 92, p2207-2226

Parker, Gary
see Garcia, Marcelo, HY Apr. 91, p414-435
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Lutes, ed. and John M. Niedzwecki, ed., 1992),
p896-899

see Sekinc, Masato, HY Apr. 92, p513-535

Parker, Gary L.
Rehabilitating Irrigation Systems from the 20th Century for the 21st Century. (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p281-285

Parker, John W.
Economic Factors in Roller Compacted Concrete Dam
Construction, (Roller Compacted Concrete III, Kenneth
D. Hansen, ed. and Francis G. McLean, ed., 1992),

Parkin, Alan K. disc. (of Failure Criteria Interpretation Based on Mohr-Coulomb Friction, by D. V. Griffiths, GT June 90, p986-999), GT Jan. 92, p189-190

Parkin, M. A.
see Loganathan, G. V., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Scarch of Solutions, Mohammad Karamouz, ed.,
1992), p386-390

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Parks, C. V.

Parks, C. V.
Overview of ORIGEN2 and ORIGEN-S: Capabilities and Limitations, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p57-64
see Broadhead, B. L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181
see Broadhead, B. L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2182-2189
Parkney Med.

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Engman, ed., 1992), p164-170

Parola, A. C.

Evaluation of Palmiter Erosion Remediation Techniques—A Case Study, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with D. J. Hagerty, p660-665

The Influence of Rectangular Pier Foundation on Local Scour, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with D. A. Schaefer, A. El-Khoury and B. M. Brown, p132-137

Seepage Effects on Bridge Pier Scour, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with D. J. Hagerty, p919-924

see Hagerty, D. J., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p900-905

Parola, Arthur C.

Parola, Arthur C. see Jones, J. Sterling, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1105

Part, A. D. see Payne, D., (Environmental Engineering Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1922), p439-444

Parra, Jorge O. High-Resolution Interwell Seismic Experiments in Sedimentary Formations, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Brian J. Zook, p519-532

see Owen, Thomas E., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p535-538

Parrish, David K.

see Boyle, William J., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p657-664

Parry-Davies, R.
Stabilization of Pier Foundation Using Jet Grouting Techniques, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and llan Juran, ed., 1992), with R. M. H. Bruin, G. Wardle and M. G. Nixon, p156-168

Parsanejad, S.
Behavior of Partially Grout-Filled Damaged Tubular
Members, with P. Gusheh, ST Nov. 92, p3055-3066

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see Flory, John F., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p934-947

Parsly, J. A.

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as, I. D.

see Moradi, B., EM Mar. 92, p557-574

see Munster, C. L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424

Parsons, L. A. Three-Dimensional Analytical Techniques for Assessing Overburden Toxicity as a Decision-Making Tool for Reclaimability Determinations, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with K. Kirk and A. Wilhelm, p839-845

Parsons, Michael W.

rarsons, Michael W.
Regulatory Considerations in Design of the Exploratory
Studies Facility, (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), with Michael D. Voegele,
p671-678

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Parylak, Krzysztof
Influence of Particle Structure on Properties of Fly Ash and Sand, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1031-1041

Paschis, J. A.

Computer-Aided Characterization of Wellfield-Testing Results in Basalts, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), with J. R. Kunkel and T. D. Steele, p475-480

Pascucci, John

see Fangmann, Steve, (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p269-274

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see Anderson, E. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2395-2398

Patchen, Richard

see You, Kwang-W., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p453-465

Paté-Cornell, M. Elisabeth
Aversion to Epistemic Uncertainties in Rational Decision
Making: Effects on Engineering Risk Management,
(Risk-Based Decision Making in Water Resources V,
Yacov Y, Haimes, ed., David A, Moser, ed. and Eugene
Z. Stakhiv, ed., 1992), with Paul S. Fischbeck, p.200-

Paulation of Partial Depth Spall Repair Materials and Procedures, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with David G. Peshkin and A. Russell Romine, p748-759

Patel, Manu A.

Patel, Mana A. see Andryszak, Robert J., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p617-622 see Balog, George G., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p24-29 see Balog, George G., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p287-290 see Berman, Neil A., (Environmental Engineering: Saving and Management Proceedings of the Proceedings of t

F. Pierce Linaweaver, ed., 1992), p287-790
see Berman, Neil A., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p623-627
see Burns, Bruce B., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p30-35
see Gruninger, Robert M., (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p275-280
see Schulte, G. Raymond, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p303-308

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see Yoon, J. Y., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p385-388

Paterson, Joan L. Mobile Continuous Lunar Excavation, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1070-1079

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see Landin, Mary C., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p114-118

see Gupta, Ram, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p32-38

rurdhan, Avinash S.

see Donigian, Anthony S., Jr., (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p817-822

Paul, David B.

see Stauffer, Peter A., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p387-403

Paul, Donald R.
see Rebeiz, Karim S., (Materials: Performance and Fre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p373-381

Paul, John F.

see Bonner, James S., EE Jan./Feb. 92, p101-119

Paulson, Boyd C. see Sanvido, Victor E., CO Dec. 92, p701-715

Ser Salavas, 'Araba Panison, Boyd C., Jr.
Shell/Toolkit for Multimedia Educational Applications, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Mohan Manavazhi, Hossam El-Bibany and Rafay Khan, p348-355

see Robinson, Allen C., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p519-526

Pavlich, Jane

see Grasso, Chris, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1443-1453

Pawsey, Stuart F. see Zueck, Robert F., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p114-128

see Fanjiang, Guang-Nan, CE Nov. 92, p59-61

Non-Point Source Pollution Due to Runoff Over Sandy Soil, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with C. Richardson, A. D. Parr and K. Janish, p439-444

Payton, Mary Lee RW-859—A Key Link Between Government and Utili-ties, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), with Kathleen Gibbard, p1281-1286

Pazargadi, Shayan see Matsumoto, Eric E., (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p147-158.

Pazdersky, Daniel
see Makowski, Paul, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p423-428

Pierce Linaweaver, ed., 1992), p425-428
Pawash, Hormoz
Development of Storage Demand Relation for Reservoirs—A Probabilistic Approach, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p549-554
Simplified Design of Multi-Stage Outfalls for Urban Detention Basins, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p861-366

Pearce, Bryan
Modeling the Salinity "History" of Great Egg Harbor
Bay, New Jersey, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall
Jennings, ed. and Nani G. Bhowmik, ed., 1992), with
Howard Mellvaine, Ed Simek, Pete Sucsy and Vibhu
Vivek, p959-964

Pearce, Bryan R.

see Kleinschmidt, David G., (Estuarine and Coastal Mod-eling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p36-47

Pearce, John B.

Perceptions, Sensitivity, and Solutions; Water Quality 2000, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p39-43

Pearcy, English C.

Courrence of Metallic Phases in Spent Nuclear Fuel: Sig-nificance for Source Term Predictions for High-Level Waste Disposal, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), with Hersh K. Manaktala, p131-136

Pearlman, Seth L.

Slope Stabilization Using In-Situ Earth Reinforcements,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), with Bradley D. Campbell and James L. Withiam, pl333-1348

Pearring, Jerome R

see Hageman, John P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1067-1073

Pearson, C. P.
see McKerchar, A. I., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p19-24

Pearson, Jon R.
CSO Abatement for Gloucester Harbor in Massachusetts,
(Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmit, ed., 1992), with Donald J.
Chelton and Michael P. Collins, p1240-1241

Peart, Walter L. Buckling of Suspended Cambered Girders, with Edward J. Rhomberg and Ray W. James, ST Feb. 92, p505-528

Peck, Millard, III. see Runyon, L. Cheryl, (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p152-155

Pedersen, Flemming Bo Head Losses in Storm Sewer Manholes: Submerged Jet Theory, with Ole Mark, HY Nov. 90, p1317-1328 disc: B. Mudgal and B. S. Pani, HY May 92, p814-

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Pedley, M. J. see Jewell, R. A., GT Oct. 92, p1505-1528 see Jewell, R. A., (disc), GT Jan. 90, p54-72

Peeha, M. A., (alac), Of Sain 30, p3-72

Feeha, M. Effects of Long Term Dry Storage of Spent Fuel on the Performance of Further Extended Storage, Transport and Disposal Packaging, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with K. Einfeld, p1181-1187

Peek, Raif see El-Bkaily, Marwan, EM Sept. 92, p1892-1906 see Jensen, Hector, ST Dec. 92, p3285-3296 see Setareh, Mehdi, ST Mar. 92, p763-782

Peese, S. J.
Modeling Tidal and Wind Driven Circulation in Sarasota
and Tampa Bay, (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan
Blumberg, ed., Ralph Cheng, ed. and Craig Swanson,
ed., 1992), with Y. P. Sheng and S. H. Houston, p357369

Peery, James S.
Experiences in Using C++ to Develop a Next Generation
Strong Shock Wave Physics Code, (Computing in Civil
Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), with Kent G. Budge, p527-534

Peindl, R. D.

see Janardhanam, R., MT Aug. 92, p252-263

Peindl, Richard D.

Evaluation of Flowable Fly-Ash Backfill. I: Static Load-ing, with Rajaram Janardhanam and Frank Burns, GT Mar. 92, p449-463

Evaluation of Flowable Fly-Ash Backfill. II: Dynamic Loading, with Rajaram Janardhanam and Frank Burns, GT Mar. 92, p464-474

Pekau, O. A

Constitutive Model for Concrete in Strain Space, with Z. X. Zhang and G. T. Liu, EM Sept. 92, p1907-1927 see Syamal, Pradip K., (disc), EM May 91, p954-973

Pekoz, T. see Bjorhovde, Reidar, (disc), ST May 90, p1230-1246

Pekoz, Teoman see Weng, C. C., ST May 90, p1230-1246 see Weng, C. C., ST June 90, p1611-1625

Pellicane, P. J. see Davalos-Sotelo, R., ST Apr. 92, p999-1013

Pellicane, Patrick J. see Så Ribeiro, Ruy A., MT Nov. 92, p385-398

Pelmulder, Susan D. see Eguchi, Ronald T., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballan-tyne, ed., 1992), p153-167

Peltonea, Petri V.
Road Aggregate Choice Based on Silicate Quality and Bi-tumen Adhesion, TE Jan./Feb. 92, p50-61

Peng, Hanchang
Impact Craters on Cosmic Dust: Do Damage to the
Spacecraft, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p969-974

Pennoni, C. R. "Chuck" Visioning: The Future of Civil Engineering, El July 92, p221-233

Penmant, D. disc. (of Knowledge-Based Modeling of Material Behavior with Neural Networks, by J. Ghaboussi, J. H. Garrett, Jr. and X. Wu, EM Jan. 91, p132-153) with G. Agrawal and J. -L. Chameau, EM May 92, p1057-1059

Peppia, Scott

A Methodology for Development of Spaced-Based Assembly Operations, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Jeff Morrow and Joel Loudenslager, p1035-1047

Peralta, Richard C eralta, Richard C.
round-water Policy-making Support: USEM Optimization Modeling Plus GIS and Graphics, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), with Christopher
M. U. Neale, Ali Gharbi, Mazibur Khan, Oscar Daza,
Douglas Ramsey and Kurt Vest, p305-310

Perardi, Thomas
San Francisco Bay Area's Experience Developing Transportation Control Measures for Air Quality Plans, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p56-63

Peraza, David B. see Cuoco, Daniel A., CF Nov. 92, p211-231

Perszen, Passeal H.

Performance of an Embankment Dam With Partial Cutoff, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W.
Boulanger, ed., 1992), with Tauseef I. Choudry,
p1022-1032

Previer, Paulo Roberto
Lunar Mining—Surface vs. in Situ—A Comparative
Study, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), with Russell J. Miller and
Gary S. Brierley, p1195-1208

Perera, Rohan W. S. see Houston, William N., TE Mar./Apr. 92, p207-222

Peres, J. M.

see Raimbault, P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p510-516

Perez, Jean-Yves

Geotechnology: An Environment of Change, CE Dec. 91, p44-45 disc: W. Scott Dunbar, CE Mar. 92, p35-36

Pérez, Rafael see Cabrera, Enrique, HY Dec. 92, p1639-1650

See Catteria, Emispho,
Petrić, Dungis
Analysis of Internal Discontinuities in Geo-Materials,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedewecki, ed., 1992), with Stein Sture and Kenneth Runesson, p.292-295
Evaluation of Plastie Bifurcation for Plane Strain versus
Axisymmetry, with Kenneth Runesson and Stein Sture,
EM Mar. 92, p512-524

Perkias, N. see Moore, J. J., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1389-1400

Perkins, Steven W.

Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Stein Sture and Hon Yim Ko, p189-200

Perkiasoa, Gregory M.

A Facility Programming Product Model, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Francois Grobler and Victor E. Sanvido, p41-48

Perman, Catherine D.

A Diagnostic Aid for Wastewater Treatment Plants, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), with Leonard Ortolano, p86-104

Frames and Rules in an Expert System for Diagnosing Wastewater Treatment Plant Problems, (Expert Sys-tems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), with Leonard Ortolano, p176-213

PIOZI.3.
Perry, E. B.
see Kauschinger, J. L., (Grouting. Soil Improvement and Geosynthetics, Roy. H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992, p. 169-181
see Kauschinger, L. Joseph, (Grouting. Soil Improvement and Geosynthetics, Roy. H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p. 194-205

Perry, F. see Crowe, B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013

Perry, F. V. see Crowe, Bruce M., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2344-2355

Perry, Frank V.

Perry, Frank V.

Geochemical Evidence for Waning Magmatism and Polycyclic Volcanism at Crater Flat, Nevada, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Bruce M. Crowe, p.2356-2365
see Valentine, Greg A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.2014-2024

see Yapa, Poojitha D., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p13-25

Perry, Ronald
The Analysis Related to the Impact of Composite Panels,
(Engineering, Construction, and Operations in Space
III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with Anthony Palazotto and Raghbor Sandhu, p1286-1296

Perstorper, Mikael see Ohlsson, Sven, ST Oct. 92, p2677-2690

Perumal, Muthiah disc. (of Kinematic Wave Controversy, by Victor M. Ponce, HY Apr. 91, p511-525), HY Sept. 92, p1335-1337

Pescatore, C.
Potential Increases in Natural Radon Emissions Due to Heating of the Yucca Mountain Rock Mass, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with T. M. Sullivan, p1599-1606

Peshkin, David

see Romine, Russell, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p146-159

Peshkia, David G.

DARWin<sup>tm</sup>—AASHTO's New Pavement Design Program, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p301-308

see Patel, Arti J., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759

Peterka, Jon A.

Sampling Errors in U. S. Extreme Wind Records, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p280-283

Peterman, Z. E.

Strontium Isotope Geochemistry of Calcite Fracture Fillings in Deep Core, Yucca Mountain, Nevada—A Progress Report, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. S. Stuckless, B. D.

Marshall, S. A. Mahan and K. Futa, p1582-1586

Peters, Dale T.

Multi-Barrier, Copper-Base Containers for HLW Disposal, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Konrad J. A. Kundig, David F. Medley and Paul A. Enders, p366-376

Peters, Douglas J.
see Heroux, Jason P., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p376-385

Peters, Jeanne M. see Noor, Ahmed K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p880-883

see Noor, Ahmed K., EM Feb. 92, p351-366

Peters, John F.

Undrained Analysis of Slopes Based on Effective Stress Methods, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Chris L. Saucier and Oswald Rendon-Herrero, p493-505
see Ebeling, Robert M., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1427-1443

Peters, Robert W. see Gopalratnam, Venbakm C., EE Nov./Dec. 92, p923-948

Petersen, Helmer M.
see Ellegaard, A. Christina, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p188-201

Peterson, Hans J.
Dry Weather Field Screening as an Indicator for Urban Drainage System Rehabilitation, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with William R. Grout, p516-

Peterson, John see Majer, Ernest, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1111-1121

Peterson, Mark R. see Abt, Steven R., HY Oct. 92, p1424-1434

Peting, Donald see Kellett, Ronald, (Housing America in the Twenty-First Century, Mehmet Inan, ed., 1992), p101-110

Petrakis, Emmanuel see Dobry, Ricardo, EM Feb. 90, p288-308

Petri, D. A.

The Application of Open System Architecture to Plane-tary Surface Systems, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with L. A. Pieniazek and L. D. Toups, p469-482

see Connolly, John F., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-2195

Petroff, Larry J. disc. (of Pipe Soil Stiffness Ratio Effect on Flexible Pipe Buckling Threshold, by Kenneth K. Kienow and Robert C. Prevost, TE Mar./Apr. 89, p112-129), TE Jan./Feb. 92, p180-182

see Galpin, Floyd L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1047-1054

Pettigrew, Lori see Thompson, Ken, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p133-138

Peyras, L. Flow and Energy Dissipation Over Stepped Gabion Weirs, with P. Royet and G. Degoutte, HY May 92, p707-717

see Degoutte, G., (disc), HY Apr. 90, p587-591

Peyton, R. Lee
see Reddi, Lakshmi N., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p575-580

Pezeshk, S.
Optimal Design of Structures with Kinematic Nonlinear Behavior, EM Apr. 92, p702-720

Pezeshk, Shahram

see Helweg, Otto J., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p532-536

Pfeffer, John T.

see Uber, James G., WR May/June 92, p281-294

Pfeifer, Robert

Lunar Habitats—Places for People, (Engineering, Con-struction, and Operations in Space III, Willy Z. Sadeh, ed. Stein Sture, ed. and Russell J. Miller, ed., 1992), p183-188

Pflock, Karl T.

see Aiken, Richard J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1555-1558

Phan, D. H. Douglas

Fran, D. H. Douglas

An Integrated Representation of Form, Function and Behavior in Structural Engineering, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Jamal A. Abdalla and H. Craig Howard, p394-401

see Howard, H. Craig, CP Jan. 92, p19-40

Phang, Kok Wai

see Pan, Tso-Chien, CF Aug. 92, p137-150

Pharr, Daniel York

Pharr, Daniel York
Fingerprint Identification of Groundwater Petroleum Contamination Using Synchronous Scanning Fluorescence, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p579-584

Phatak, D. R.
disc. (of Effect of Footing Shape on Behavior of Cantilever Retaining Wall, by John S. Horvath, GT June 91,
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GT Sept. 92, p1484-1485
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A. Sridharan, N. S. V. V. S. J. Gandhi and S. Suresh,
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disc. (of Technique for Using Fine-Grained Soil in Rein-

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disc. (of Technique for Using Fine-Grained Soil in Reinforced Earth, by A. Sridharan, B. R. Srinivasa Murthy, Bindumadhava and K. Revanasiddappa, GT Aug. 91, p1174-1190) with Shashank Sinha, GT Dec. 92, p2009
disc. (of Ultimate Bearing-Capacity Tests on Sand with Clay Layer, by Masanobu Oda and Soe Win, GT Dec. 90, p1902-1906) with M. P. Shelke and A. R. Wani, GT May 92, p827-829

Phelan, R. S.

Computer-Aided Concrete-Placement Optimization, with F. Radiy, C. Haas and C. Hendrickson, CO Mar. 90, p172-187

disc: S. T. Alkass and O. Moselhi, CO Mar. 92, p205-208

Phelps, Gregory C.
see Sack, Dennis A., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p519-531

Phelps, James E. see Sutter, Thomas R., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p296-

Phelps, Suzanne R. see Numark, Neil J., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manago-ment Program Committee, 1992), p1074-1081

Phernambucq, S. G.

Securing Strategic National Security Objectives Through Maritime Activities, (Ports '92, David Torseth, ed., 1992), with T. H. Wakeman, p316-321

see Azhar, Aftab H., IR Jan./Feb. 92, p36-55

Philip, Jacob see Gupta, Dinesh C., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p212-219

Phillip, N.

Oxidation of Bromide by Hypochlorous Acid in Aqueous Solutions: Stoichiometry and Kinetics, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with V. Diyamandoglu, p634-639

Phillips, Stephen H. E. see Carter, Trevor G., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p410-422

Philpot, Timothy A. see Rosowsky, David V., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p87-90

Phoon, K. K. see Quek, S. T., GT May 92, p726-742

Pi, Yong Lin

Energy Equation for Beam Lateral Buckling, with N. S. Trahair and S. Rajasekaran, ST June 92, pl 462-1479 Prebuckling Deflections and Lateral Buckling, II: Applications, with N. S. Trahair, ST Nov. 92, p2967-2985 Prebuckling Deflections and Lateral Buckling. I: Theory, with N. S. Trahair, ST Nov. 92, p2949-2966

Picard, R.

see Crowe, Bruce M., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p2344-2355

Pickens, M. Kathryn

The Transport and Fate of Drilling Muds, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Wilbert J. Lick, p202-

Pielke, Roger A., Jr.
Reappraising the Space Shuttle Program, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2220-2230

Pieniazek, L. A.

Pieniazek, L. A. Characterization of Emplacement Strategies for Lunar and Mars Missions, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with L. D. Toups, p1631-1644
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see Connolly, John F., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-

Piepel, Gregory F. see Hrma, Pavel R., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1236-1243

Pierce, David

Seismic Rehabilitation of Seattle's Pier 69, (Ports '92, David Torseth, ed., 1992), with Ronald E. Martinson,

Naval Pier Foundation Design and Construction, Pearl Harbor, Hawaii, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Laszlo Buzasi, p663-679

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Pigeon, Michel see Banthia, Nemkumar, MT Feb. 92, p27-40

Pigford, Thomas H.

The Role of Performance Assessment in Validation, Reg-ulation and Public Acceptance, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 999-

Piggott, Terry
The Durability of Rubble Mound Armour in Service—
A Case Study, (Durability of Stone for Rubble Mound
Breakwaters, Orville T. Magoon, ed. and William F.
Baird, ed., 1992), with Sam Smith and Angus Jackson,
p254-267

Pihlajamāki, Jari see Huhtala, Matti, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p229-243

Pijaudier-Cabot, Gilles Wave Propagation in a Nonlocal Strain-Softening Contin-uum, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Antonio Huerta, p620-623

Pilarczyk, Krystian W. Dutch Experience on Design of Dikes and Revetments, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p?94-813

see Hoekstra, Ammo, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1037-1054

see Popovics, J. S., (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p492-504

Pilecki, T. J. disc. (of Hydrocompression Settlement of Deep Fills, by Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, p1536-1548), GT June 92,

disc. (of Necessary Redundancy in Geotechnical Engineering, by Jory O. Osterberg, GT Nov. 89, p1511-1531), GT Feb. 92, p333-334

Pilgrim, David H.

Regional Methods for Design Floods in Australia, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1-6

Pincince, Albert B.

Toward a Low-Emissions Wastewater Treatment Plant, (Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver, source-In Sea ed., 1992), p1-6

Pindera, Marek-Jerzy
The Effect of Multiple Compliant Layers at the Fiber-Matrix Interface on Residual Thermal Stresses in Metal Matrix Composites, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Alan D. Freed, p1262-1272

Ping, W. Virgil

A Laboratory Investigation on Long-Term Performance of Asphalt Concrete Treated with Antistripping Addi tives, (Materials: Performance and Prevention of Defi-ciencies and Failures, Thomas D. White, ed., 1992), with Thomas W. Kennedy, p206-215

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Pitney, Kenneth A

Importance of ET on Colorado River Water Quality, (Irrigation and Drainage: Saving a Threatened Resource— In Search of Solutions, Ted Engman, ed., 1992), p171-

Pitt, J. M.

Reliability-Based Design for Feeeze-Thaw Concrete, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with M. Seshadri and D. L. Covey, p462-475

Pittman, David W.

see Rollings, Raymond S., TE May/June 92, p361-370

Pixley, Ray Arthur

Entire Use of Computer Resources, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1015-1021

Plaskacz, E. J.

see Belytschko, T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p27-41

Plaskacz, Edward J.

On Distributed Processing Applications in Finite Element Analysis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Martin R. Ramirez and Sanjeev Gupta, pl07-110

Critical Review of Thin-Plate Stability Equations, with Gwynne Davies and Cyril Snell, EM Mar. 92, p481-495

Pletka, B. J.

see Carsley, J. E., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1219-1231

Pletta, Dan H.

Pletta, Dan H.
disc. (of Dialogue on Political Contributions and Engineering, by William E. Norris, El Jan. 90, p38-41), El Jan. 92, p88-90
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Pievris, Nikolaos

Flevria, Nikolaos
FRP-Reinforced Wood as Structural Material, with Thanasis C. Triantafillou, MT Aug. 92, p300-317
see Triantafillou, Thanasis C., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p710-717

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see Fowler, J. R., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p904-910

acher, Kim

See Polliner, Eugene, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p802-809

Plumelle, C.
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Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p739-750

see Oswald, George E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p62-63

puellec, H.

Irrigation Project Modernization, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with C. M. Burt, p197-

Pochop, Larry

see Briggs, Brian K., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p257-262

Podleany, A. see Bennett, P. C., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1826-1831

Podnieks, Egons R.

Lunar Surface Mining Equipment Study, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with John A. Siekmeier, p1104-1115

Seismic Mitigation of the Memphis Water System, (Life-line Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballantyne, ed., 1992), p16-28

Pohland, Frederick G. see Luthy, Richard G., El Oct. 92, p361-380

Poirier, Claude

see Bideau, Daniel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p167-170

Portot, James W.
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disc: Robert B. Thorn, ME Apr. 92, p211-212

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Pollner, Engene Design of Oak Point Link Railroad Trestle, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Kim Plumacher, p802-809

Pollock, David G.

see Goodman, James R., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p73-77

Pollock, Joseph B., Jr.
Palm Beach County Traffic Impact Analysis—A Proto-type, (Site Impact Traffic Assessment: Problems and So-lutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Jacob Wattenberg, p104-108

Pollog, Thomas E.
Facility Interface Capability Assessment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

dma, J. F.

Polma, J. F. No More Newtons (ltr), CE Nov. 92, p36

Pomphrey, Richard

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Ponce, Victor M.

Ponce, victor M.

Kinematic Wave Controversy, HY Apr. 91, p511-525
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clo: HY Sept. 92, p1339-1341

Pond, Daniel J.

Human Factors Programs for High-Level Radioactive
Waste Handling Systems, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p1547-1554

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Pope, Gregory J.

Effects of Freezing on Impact Properties of RTM Composites, and Their Applications in Offshore Structures, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Vistasp M. Karbhari, p 839

Pope, Ian
Facilitating Technology for Electric Power Generation,
(Ocean Energy Recovery: the State of the Art, Richard J.
Seymour, ed., 1992), p276-292

Pope, Sound Our Aging Coastal Infrastructure, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1055-1068 see Burke, Cheryl E., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p462-478

Steven A. Hughes, ed., 1992), p462-478

Pope, R. B.

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see Broadhead, B. L., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2174-2181

see Harrison, I. G., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1324-1329

see Johnson, P. E., (High Level Radioactive Waste Management Program Committee, 1992), p1310-1316

see Shappert, L. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Level Radioactive Waste Management, High Committee, 1992), p1850-1859

ment Program Committee, 1992), p1855-1859

Pope, Stephen C.

see Forslund, David W., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518

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e Engelhardt, M. D., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1043-1046

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Popovics, J. S.
A Theoretical Approach to Characterize Reinforced Concrete Using Stress Waves, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with J. L. Rose and A. Pilarski, p492-504

see Popovics, S., (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p94-103

Popovics, S.
A Critique of the Ultrasonic Pulse Velocity Method for Testing Concrete, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Slein Sture, ed., 1992), with J. S. Popovics, p94-103

Srance Co., 1972, whith J. S. Poportos, poetro.
Poran, Chaim J.
A New Technique for Quality Control of Dynamic Compaction, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with King-Sen Heh and Jorge A. Rodriguez, p915-926

Jurian, ed., p915-926 driguez, p915-926 Non-Intrusive Rayleigh Wave Measurement System for Soil Profiling in Ports, (Ports '92, David Torseth, ed., 1992), with Jorge A. Rodriguez, Maria C. Arbelaez, Takenori Satoh and Edward Kavazanjian, Jr., p390-

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see Vargas, Juan C., CE Mar. 92, p52-55

Porter, James C.

Porter, annes C.
Standard of Care for Delivery of Engineered Products, El Apr. 90, p193-201
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Porter, Steven R.
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Lutes, ed. and John M. Niedzwecki, ed., 1992),
p912-915

Ports, M. A.

Tons, Na. A.:
Two-Dimensional Hydraulic Analysis of the Owensboro
Bridge and Approaches, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
with T. G. Turner and D. C. Froehlich, p.280-280.

orts, Michael A.

New Orleans, Louisiana, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p260-267

disc. (of Microbiologically Induced Corrosion, by P. J. B. Scott and Michael Davies, CE May 92, p58-59), CE July 92, p36

Post, James L. disc. (of Stabilizing Compacted Clay Against Chemical Attack, by Gregory P. Broderick and David E. Daniel, GT Oct. 90, p1549-1567), GT Apr. 92, p659

Lunar Farside, Mars Polar Cap, and Mercury Polar Cap Neutrino Experiments, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2252-2263

see Crowe, B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013

Potnis, A. S.

see Phatak, D. R., (disc), GT Apr. 90, p604-624

Pototschnik, Mario J.

Settlement Reduction by Soil Fracture Grouting, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), 9398-409

Potter, John C.

Airfield Pavement Creep Failure Investigation, CF Aug. 92, p177-184

Powell, Graham H.

see Sause, Richard, CP July 92, p248-265

Powen, R. R.
Understanding Nuclear Waste Management Within a Global Framework, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with M. Robinson and W. Pankratius, p1465-1469

Powell, Richard R.

Poweit, Richard R.
An International Education Agenda in Nuclear Energy and Radioactive Waste Management for the 21st Century: Beyond Engleberg, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Edwyn James and Alfred Wohlpart, p1494-1498

wers, Allen R.

The U.S. Bureau of Reclamation—New Directions in Water Management and Conservation, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p232-237

Powers, J. P., (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171

Powers, J. T. see Kershenbaum, Naum, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p1006-1035

Powers, Rodney G.
Sprayed-Zinc Galvanic Anodes for the Cathodic Protection of Reinforcing Steel in Concrete, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Alberto A. Sagues and Toshiya Murase, p732-747

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Powledge, George R. see Wooten, R. Lee, CE Jan. 92, p52-54

Prablu, R. S. disc. (of Uplift Capacity of Z-Purlins, by Roger A. La-Boube, ST Apr. 91, p1159-1166), ST July 92, p1980-1983

Pradel, Daniel

Prisce, Daniel disc. (of Hydrocompression Settlement of Deep Fills, by Thomas L. Brandon, J. Michael Duncan and William S. Gardner, GT Oct. 90, p1536-1548) with Glen Raad and Russell G. Harter, GT June 92, p954-955

and Russell G. Harter, GT June 92, p934-955

Pradlwarter, H. J.

A Selective MC Simulation Technique for Nonlinear Structural Reliability Assessment, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p69-72

see Schueller, G. I., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p451-454

Prakash, Anand
Design-Basis Flood for Rehabilitation of Existing Dams,
HY Feb. 92, p291-305
Implications of Design Uncertainty in Benefit-Cost Analysis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), p120-125

Frakasa, Saamsoer Piles Under Dynamic Loads, Geotechnical Special Publi-cation No. 34, 1992, 0-87262-905-8, 270pp. see Puri, Vijay K., (Piles Under Dynamic Loads, Shamsh-er Prakash, ed., 1992), p153-169

Prange, Bernd see Vrettos, Christos, GT Oct. 90, p1581-1585

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see Raj, Kanwar, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management
Program Committee, 1992), p899-903

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redmore, Steven a. ree Stamos, Christina L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p80-85

Prendergast, John The Desalination Situation, CE Aug. 92, p42-44 A European Road Comes to the U.S., CE May 92, p52-54

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Solid Modeling of RC Beams: 2. Computational Environ-ment, with M. A. Austin, CP Oct. 92, p404-416 see Austin, M. A., CP Oct. 92, p389-403

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Impact of Flow Variability on Error in Estimation of Tributary Mass Loads, with Victor J. Bierman, Jr. and Stephen E. Silliman, EE May/June 92, p402-419

Preusch, David P.

Hillsboro Basin Surface Water Management Model, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), with Jayantha Obeysekera, John M. Crouse and Kendrick Logsdon, p810-81

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Price, Dennis L.
The Need for a True System Approach for High-Level
Waste Management Systems Engineering Recommendations from the U.S. Nuclear Waste Technical Review
Board, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p822-826

Price, Harold E. (Smoke)

The Human Side of Systems, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1534-1541

Price, Richard E.

see Wilhelms, Steven C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1055-1060

Pridal, Daniel

see Sing, Edward F., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p464-469

Pridal, Daniel B.

Levee/Floodwall Freeboard Design for an Urban Flood Control Project, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Edward F. Sing, p803-808

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see Rzonca, Gregory F., CF Feb. 90, p24-29

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Prince, J. K.

see Shenk, K. J., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p2313-2317

"U—A Method of Analyzing Signalized Intersections, (Site Impact Traffic Assessment: Problems and Solu-tions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T.C. Sutaria, ed., 1992), with Robert W. Crommelin,

Prion, H. G. L.

Beam-Column Behavior of Fabricated Steel Tubular Members, with P. C. Birkemoe, ST May 92, p1213-

The German Participation in the Soviet MARS 94/96 Mission, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2293-2304

Prokopowicz, Adam K.

see Berg-Andreassen, Jan A., WW Jan./Feb. 92, p75-86

Promise, John

Promise, John
Activities of the North Central Texas Council of Governments in Urban Storm Water Planning, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), with Samuel W. Brush, p43-49

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Proubet, J. see Bardet, J. P., EM Feb. 92, p397-415

Prucz, Zolan

Modifications to Coal Pier 6 Made Necessary by a Deeper Channel, (Ports '92, David Torseth, ed., 1992), with Barney T. Martin and Jerry L. Richstein, p164-177

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Psalls-Dombrowski, Maurees J.
Modeling of Localized Electrochemistry Within Occluded
Regions, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with Alan Turnbull and Ronald
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Packett, Jay A. see Swift, Daniel P., CR June 92, p41-57

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see Spaulding, M. L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl 70-175

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Leaks in Pipe Networks, with James A. Liggett, HY July 92, p1031-1046

yac prostrious memorial Method for Finding Leaks in Pipe Networks, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p809-815

Futido, Julio E.

Structural Reliability and Failure Mechanism Determination Using Monte Carlo Simulation with Variance Reduction Techniques, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), with Timothy L. Jacobs and Edison C. P. Lima,
p507-510

Pulley, John

Lunar Liquid Oxygen Production Facilities, (Engineer-ing, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Chava Goodman and Al Tanner, p739-751

Lunar Resource Base, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Todd K. Wise, Claude Roy and Phil Richter, p483-492

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Puri, Satinder P. S.

Users' Groups, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1022-1030

Puri, Vijay K.

Observed and Predicted Response of Piles Under Dynamic Loads, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with Shamsher Prakash, p153-169

Putty, Roger G.
Statistical Analysis of Wastewater Flow Reduction,
(Water Resources Planning and Management: Saving a
Threatened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), with M. Najmus Saquib,
William O. Maddaus and Kayleen Warner, p774-779 Pye, L. D.

see Joseph, I., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p911-916

m, S. R.

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Quek, S. T.
Further Contributions to Reliability-Based PileSettlement Analysis, with Y. K. Chow and K. K.
Phoon, GT May 92, p726-742

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See Van Daien, n., (usis), or and Vertical Slot Vortex Drop Quick, Michael C. Analysis of Spiral Vortex and Vertical Slot Vortex Drop Shafts, HY Mar. 90, p309-325 disc: Willi H. Hager, HY Jan. 92, p100-101 disc: P. Ackers, HY Jan. 92, p102-104 clo: HY Jan. 92, p104-107

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A Department's Perspective on Computer Education (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Joel I. Abrams, p73-80

ina, R. D.

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Niedzwecki, ed., 1992), with Kiyoshi Uno and Hajime Tsutsusmi, p324-327

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22, poor-oss Radford, Donald W. Composite Materials for Structures on Planetary Surfac-es, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Willy Z. Sadeh and Boyle C. Cheng, pl 297-1308

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Externalizing Project-Specific Knowledge in Structural
Design, Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), with H.
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ssaro, M. A., (Lifeline Earthquake Engineering in the Central and Eastern U.S., Donald B. Ballan-tyne, ed., 1992), p29-42

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Methodology Developed by the French National Nuclear
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(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Frogram Committee, 1992), with C. Izabel and J. M. Peres, p510-516

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Assessment of Derived Flood Frequency Distributions, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Juan B. Valdes, p268-273

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Raj, Kamwa: Evaluation of Vitrified High Level Radioactive Waste Product for Long Term Behavior, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with M. S. Kumra and A. N. Prasad, p899-903

Rajagopalan, V.
The Engineer's Role in Sustainable Development, CE
Aug. 92, p6

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A Mars I Watt Vortex Wind Energy Machine, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Christopher Crowley, Ronald Thomson and Owen Gwynne, p786-797

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Materials and Structures Synergistic with In-Space Materials Utilization, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Farhang Shadman and K. R. Sridhar, p714-725

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Recent Wave Kinematics Experimental Studies, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with J. Zhang, C. A. Spell and J. K. Longridge, p607-621

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Hydrological Aspects of Droughts, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with A. Al-Wagdani, p334-340

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nao, n. . Suresa disc. (of Solving Turbulent Flows Using Finite Elements, by John I. Finnie and Roland W. Jeppson, HY Nov. 91, p1513-1530) with S. Sankaranarayanan, HY Dec. 92, p1698-1700

Rao, M. Gopala

Effect of Solid-Phase Selectivity on Sorption of Cobalt
and Strontium by Zeolitized Tuff. (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992), with
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American Scientific Sc

Raoof, Mohammed Axial and Free-Bending Analysis of Spiral Strands Made Simple, with Yu Ping Huang, EM Dec. 92, p2335-2351 Free-Bending Fatigue Life Estimation of Cables at Points of Fixity, EM Sept. 92, p1747-1764
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eroux, Jason P., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p376-385 see Heroux

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Runed Movement and Mixing in Heterogeneous Aquifer, 
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. 
and Nani G. Bhowmik, ed., 1992), with John Hoopes, 
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disc. (of L'Ambiance Plaza: What Have We Learned, by Virginia Fairweather, CE Feb. 92, p38-41), CE June 92, p39-40

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Rathbone, Daniel B.
Traffic Impact Studies—Current Practices from Cities'
Perspective, (Site Impact Traffic Assessment: Problems
and Solutions, Robert E. Paaswell, ed., Nagui
Rouphail, ed. and T. C. Sutaria, ed., 1992), p109-113

Robupani, ed. and T. C. Sularia, ed., 1992, p109-115

disc. (of Aeration at Ohio River Basin Navigation Dams, by Steven F. Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens and George H. Taylor, EE Mar/Apr. 90, p361-375, EE May/June 92, p446-447 disc. (of Gas-Transfer Measurements Using Headspace Analysis of Propane, by John R. Thene and John S. Gulliver, EE Nov./Dec. 90, p1107-1124), EE May/June 92, p454-456

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Comparison of Numerical Modeling Approaches for Sub-surface Immiscible Contaminant Transport, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Linda M. Abriola, p275-280

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Raudkirs, Arved J.
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Alternative Airfield Pavement Quality Control, (Interna-tional Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), with Terry A. Ruhl, p109-

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Partitioning and Transmutation of Long-Lived Fission Products, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with D. W. Wootan, R. A. Karnesky, F. M. Mann and W. W. Schulz, p1711-1717

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4, R. S.

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Reckhow, Remarkh H.
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clo: GT Oct. 92, p1656-1657
Survey of and Classification Criteria for Most Commonly
Used Groundwater Models, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linawaver, ed., 1992), with C. Harold
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peoples Sampath K. R., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p397-402

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Station Selection for Pooling Flood Data in a Densely
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Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p25-30

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see Warner, James, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p252-264

Experiments with Wind Effects on Pavement Runoff, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with David F. Ki-bler and George Krallis, p931-933.

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see Kibler, David F., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p725-728

Reese, Lymon C.
Use of Drilled Shafts in Stabilizing a Slope, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Shin-Tower Wang and Jeffrey L. Fouse, p1318-1332

Refai, T. M.

Review of NPP Concrete Degradation Factors and Assessment Methods, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with M. K. Lim, pl 82-193.

Regan, Robert D.

GEIS: A Geographic Information System for the Earth Sciences, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p833-838

Regin, T.
The U.S. Naval Facilities Offshore Platform Inspection,
Maintenance, Repair and Rehabilitation Program,
(Civil Engineering in the Oceans V, Robert T.
Hudspeth, ed., 1992), with T. O'Boyle, p531-545

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see Lovell, Jeffrey S., (disc), EE Sept./Oct. 90, p988-990

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Rehak, Daniel R.

Structural System Control Using Neural Networks, (Com-puting in Civil Engineering and Geographic Informa-tion Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with James H. Garrett, Jr., p864-871

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see Saouma, V. E., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p788-791

Reich, W. J.

see Notz, K. J., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p122-130

Reich, Yoram

Generation of Examples for Training a Learning Design System, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p999-1006

Inductive Learning of Bridge Design Knowledge, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), with Steven J. Fenves, p169-189
Text and Reference Books on Knowledge Acquisition and Machine Learning. (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), p204-214

Reid, B. D.

see Luksic, A. T., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p82-87

Reid, Stuart G.

Reid, Stmart G.
Construction Loads on Floors: Results of a Survey, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p499-502
Floor Live Load Models and Pattern Load Effects, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p503-506

Reidinger, Richard

Reidiager, Richard Promoting Private Irrigation Development: The Irrigation Sector Program Experience in Nepal, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Upendra Gautam, p221-226

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see Wang, Y. P., EM June 92, p1201-1220

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Reinhorn, Andrei M.
see Lobo, Roy F., (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p905-912

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Reitsma, René F.

Retsua, Rebe F.
Application of Decision Support Systems (DSS) to the Management of Radioactive Wastes, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Jacquelyn F. Sullivan, p469-474

Reitsma, Rene F.

Bootstrapping Models Using Existing Databases and Ob-ject Orientation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with David Sieh, p598-605

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see Wang, Keh-Han, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p224-227

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ALIVE (Advance Linear Velocity): Surface Irrigation Rate Balance Theory, with W. W. Wallender, IR Jan./ Feb. 92, p138-155

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Rennie, S. E.

Renne, S. E. Techniques for Visualization of Estuarine and Coastal Flow Fields, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with J. M. Hamrick, p48-55

Rentzis, Dimitris

A Probabilistic Regional Damage Estimation Model for Earthquake Occurrences, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Anne S. Kiremidjian and Craig Howard, p21-24

etto, Pedro C.

Repetto, Pearo C.
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Repic, Ed Mars Via the Moon—A Robust Lunar Resources-Based Architecture, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Wally McClure,

Replogie, J. A.
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Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p595-600

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Reyna, F.

A Computer Program for the Analysis of Reinforced Soil,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and lian Juran, ed.,
1992), with D. Humphrey, B. Christopher and J. L.
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Issues in Hydropower Modeling Using GEMSLP Algo-rithm, with S. P. Simonovic, WR Jan./Feb. 92, p54-70

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disc. (of Relative Compaction of Fill Having Oversize Particles, by Robert W. Day, GT Oct. 89, p1487-1491), GT Oct. 91, p1637-1639

disc. (of Settlement and Moisture Movement in Collapsi-ble Soils, by Mostafa El-Ehwany and Sandra L. Hous-ton, GT Oct. 90, p1521-1535), GT Apr. 92, p656-658

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see Wu, Y.-T., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p491-494

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Rhodes, Jenaifer
An Evaluation of Highway Flood Damage Statistics, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Roy Trent, p1082–1087

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Rhone, Richard A.
see Glasgow, Dan L., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p214-219

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Design Charts for Timber Beam-Columns, with Mehrdad
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Rice, Charles E.

HGL Elevation at Pipe Exit of USBR Type VI Impact
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clo: HY July 92, p1077

Rice, D. I.
Transient Analysis of Flexible Space Structures, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), with E. C. Ting, p827-838

Rice, Donald W.
Soil Contamination Issues at Port Marine Terminals, (Ports '92, David Torseth, ed., 1992), p288-300

Noterview of AWARE: A Software Tool for Balancing Power and Nonpower Values in Water Resource Planning, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p108-116

Rice, R. H.
see Roth, W. H., (Stability and Performance of Slopes and
Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p1349-1364

Rice, S. V. see Nartker, T. A., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2106-2108

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Richard, Ralph M.
Support Structures for High-Resolution Optical Systems, with Daniel Vukobratovich, AS Jan. 92, p24-43 disc. (of Reliability Analysis of Particlly Restrained Steel Connections, by Gregory L. Tucker and Richard M. Bennett, ST Apr. 90, p1090-1101), ST Mar. 92, p865-

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Performance of Upper Stillwater Dam, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p148-161

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Richardson, Douglas
GeoLink: Integrating GIS and GPS for Land Use Planning, Road Mapping, and Environmental Analysis, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Thad Mauney, p325-327

Richardson, John A.

Issues Influencing Colocation and Integration of Cask
Maintenance and MRS Facilities, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992), with
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see Fenster, David F., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p204-211

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A Modified Adjoint Method for Inverse Eddy Viscosity Estimation for Use in Coastal Circulation Models, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Vijay G. Panchang, p733-745

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Richardson, Thomas G.

Groundwater Recharge as a Reclaimed Water Transport Mechanism, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Nereus L. Richardson,

Richman, Mark W.

Unconfined Granular Materials Thermalized by Fluctu-ating Horizontal Surfaces, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Richard E. Martin, p900-903

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see Prucz, Zolan, (Ports '92, David Torseth, ed., 1992), p164-177

Richter, Cheryl Allen

easonal Monitoring of Pavements—A Whole Lot More, (Road and Airport Pavement Response Monitoring Sys-tems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p182-195

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see Pulley, John, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p483-492

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See Younker, Jean L., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p517-524

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Environmental Monitoring for Uranium and Neptunium at Yucca Mountain, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2323-2330

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Stiffened Sheathings of Orthotropic Cylindrical Shells, ST Apr. 92, p926-943

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Riker, Richard E.

RIKER, RICHARD E. STORM PILE Driving, (Stability and Per-formance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Don-ald G. Anderson and D. Dexter Bacon, p292-309

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Full Scale Application of Active Bracing Systems, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. M. Reinhorn and T. T. Soong, p816-819

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The Potential Fate of Particulate Contaminants from the Rehabilitated Ranger Uranium Mine, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), with P. W. Waggitt, p884-889

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Risch, Dan A., (Irrigation and Drainage: Saving a frequency of the A., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p559-564

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Environmental Constraints Associated with Dredging in
Southern California, (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), with Mohammed N.
Chang, p975-988

Ristoiu, Dumitre In-Flight Calibration of Mass Spectrometer, Flight Calibration of Mass Spectrometer, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Gavrila Toderean, Iosif Chereji, Daniel Olimpiu Ursu and Vadim Glebovici Istomin, p2264-2270

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Ritter, J. A.
Hydrogen Generation During Treatment of Simulated
High-Level Radioactive Waste with Formic Acid,
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Level Radioactive Waste Management Program Committee, 1992), with J. R. Zamecnik and C. W. Hsu,
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One-Dimensional River Flow Simulation with Particular
Consideration of Ecology and Environment, (Hydrauch
Engineering: Saving a Threatened Resource—In Search
of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), with M. Schröder and G. Rouvé,
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Sture, ed. and Russell J. Miller, ed., 1992), p296307

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Bryond GIS: The Integrated Spatial Information System, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p825-832

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Ro, Young Jae

3-D Modelling of Heat Discharge from Ul-Jin Power
Plant into Coastal Waters of Korea East Sea, (Estuarine
and Coastal Modeling, Malcolm L. Spaulding, ed.,
Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng,
ed. and Craig Swanson, ed., 1992), with Tae In Kim,
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see Kjartanson, B. H., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1129-1136

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Decision Management for the Hanford Environmental
Dose Reconstruction Project, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with H. A.
(Walt) Haerer and Dettof von Winterfeldt, p1743-1750

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Sture, ed. and Russell J. Miller, ed., 1992), p21882195

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Roberts, John
Use of Annotated Outlines to Prepare Guidance for License Applications for the MRS and MGDS, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee,
1992), with William R. Griffin, p1040-1046

Licensing Issues: Clarification and Convergence, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), with Linda J. Desell, Mary L. Birch, Lester Ber-kowitz and Joseph F. Bader, p233-236

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Role of Land Information System in Operation and
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1992), with Sharen L. Wood, p317-322

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The Role of the M&O in the High-Level Civilian Radio-active Waste Management System, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), 2415-2415. p2415-2416

Robertson, Steve
Design of Irrigation Distribution System, (Irrigation and
Drainage: Saving a Threatened Resource—In Search of
Solutions, Ted Engman, ed., 1992), p462-467

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Design and Maintenance of Rural Water Supply Systems for Improved Performance, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Ronald L. Droste, p523-528

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Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
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Use of Contaminant Mobility and Transport Parameters to Determine Water Testing Protocol, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Perry B. Kubek, p831-836 Winter Nutrient Losses to Groundwater Associated with Various Tillage Manure Systems, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Michael F. Walter, p567-572

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Wave Propagation in Solids, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p633-636

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Massively Parallel Computing, C++ and Hydrocode Algorithms, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Ario L. Ames, H. Eliot Fang, Dino Pavlakos, Courtenay T. Vaughan and Philip Campbell, p519-526

Creep and Creep Rupture of Metallic Composites, with W. K. Binienda and M. Miti-Kavuma, EM Aug. 92, p1646-1660

Robinson, John T.
Case Study of an Offshore Horizontal Boring, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p697-712

see Douglass, Scott L., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p713-727

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p1321-1920 Robison, Rita A New Look at Galvanized Bridges, CE July 91, p52-55 disc: Frederick W. Evans, CE Nov. 91, p30 disc: Michael Kwart, CE Jan. 92, p32 Safeguarding Steel, CE Apr. 92, p50-53 disc: Raymond G. MacKay, Jr., CE Sept. 92, p36 Seattle Swings Again, CE July 92, p46-49 Smart Structures, CE Nov. 92, p66-68

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Residual Stress Mitigation Considerations for Waste
Package Design and Closure, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with T. W.
Doering, p377-384

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see Morad, Ayman A., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p737-745

Rocha, M. M.

Some Remarks on BK-Models for Fatigue Crack Growth, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with G. I. Schuelller, p316-319

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see Lee, Gordon K. F., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p999-

Rod, Samuel R.
Graphics-Based Site Information Management at Hanford TRU Burial Grounds, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), p450-457

Rodgers, Charles
Objective Measurement of Drought and Agricultural Response to Drought in the Water-Constrained Monson Climate of Tamil Nadu, India, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Mark Svendsen, p347

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Rodrigues, A. C.
Reservoir Water Quality Modeling in Northern Portugal—Some Case Studies, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
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Rodríguez, Germán Rodríguez Spectral and Statistical Characteristics of Wind Waves Off Canary Islands, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p622-636

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see Poran, Chaim J., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p915-926

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Rodriguez-Gomez, Jessica Impact of Variability in Pavement Parameters on Backcalculated Moduli, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Carlos Ferregut and Soheil Nazarian, p261-275

Rodwell, R.
An Evaluation of Early Application of the Transuranic Burning Concept, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. A. Shaw and R. F. Williams, p1373-1380

Roe, Emery M.
Overseas Perspectives for Managing Irrigation Drainage in California, IR May/June 91, p350-360 disc: Michael B. Sonnen, IR Sept./Oct. 92, p837-839

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see Curtis, David, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p338-344

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CSO Rehabilitation Strategies for Urban Areas, (Water
Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), with Edward H. Burgess, p654-

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see Bowen, B. R., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Recent Findings in Active Structural Control, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p824-827

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Incineration—Panacea or Pandemic?, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p157-

Rogers, J. David
Long Term Behavior of Urban Fill Embankments, (Stability and Performance of Slopes and Embankments II,
Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), p1258-1273

Rogers, James S.
see Fouss, James L., (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p25
see Fous, James L., (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p394

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see Sheu, Kathlie S. Jeng, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p587-592

gers, John W.

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Building a Pipeline—Not a "Flow Through" Process,
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Competitive Bids May Hamper R&D (ltr), CE Feb. 92, p31-32

Roggenburk, Ronald J.

Delaware Valley Regional Planning Commission's Anticipated Response to the Clean Air Act Amendments of 1990, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p46-55

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Roig, Lisa C.

Roig. Lisa C. Continuum Model for Flows in Emergent Marsh Vegetation, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Ian P. King, p268-279

Rojahn, C.

Transportation Lifetine Losses in Large Eastern Earth-quakes, (Lifetine Earthquake Engineering in the Cen-tral and Eastern U.S., Donald B. Ballantyne, ed., 1992), with C. Scawthorn and M. Khater, p87-101

Predicting Water Quality as Affected by ET Using the Root Zone Water Quality Model, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Donn G. DeCoursey, p158-163

Rollings, Marian P.

Durability Failure of a Concrete Block Port Pavement, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Ray-mond S. Rollings, pl-15

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Investigation of a Concrete Blistering Failure, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with G. S. Wong, p16-30

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Field Instrumentation and Performance Monitoring of Rigid Pavements, with David W. Pittman, TE May/ June 92, p361-370

see Rollings, Marian P., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p1-15

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see Darwin, David, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p494-497

ero, L

Models for Calculating Radionuclide Release from the Near Field, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), with L. Nilson, L. Moreno and I. Nertenieks, p934-999

Romine, A. Russell see Patel, Arti J., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p748-759

Romine, Russell
Pavement Surface Maintenance: Overview of SHRP H106 Experimental Installations, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), with David Peshkin, Kelly Smith and Tom Wilson, p146-159

Romstad, Karl M.
see Zokaie, Toorak, (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p810-817

Rondal, Jacques disc. (of Residual Stresses in Cold-Formed Steel Mem-bers, by C. C. Weng and Teoman Pekoz, ST June 90, p1611-1625), ST May 92, p1427-1428

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disc. (of Proposal for Structural Design Peer Review, by
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Roos, Maurice
Cloud Seeding: The Engineering is Done, but What About
Social Impacts?, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p565-570

Rosa, J. M.

Rosa, J. M. Application of NUHOMS\* to an Integrated MRS/ Transportation System, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. A. Lehnert and R. D. Quinn, p196-200 see Quinn, R. D., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2219-2226

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Development of Detached Breakwater Design Criteria
Using a Shoreline Response Model, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with
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Roschke, Paul N.

see Papados, Photios P., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1012-1015

see Popovics, J. S., (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p492-504

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see Espey, W. H. Jr., (Hydraulic Engineering: Saving a
see Espey, W. H. Jr., (Hydraulic Engineering: Saving a
shall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p940-945

Rosen, A.
see Edwards, B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), p943-948

see Xue, G. L., (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1113-1120

Rosen, Peter S. see Vine, David B., (Ports '92, David Torseth, ed., 1992), p849-867

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Quality, Roger L. Wayson, ed., 1992), p283-297

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Load Duration and System Effects in LRFD for Wood Construction, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Bruce R. Ellingwood, p78-81

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Serviceability Analysis of Wood Beams with Creep, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), with Kenneth J. Fridley and Timothy A. Philpot, p87-90

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Impact Fees: Practical Guide for Calculation and Implementation, with Scott Ian Thorpe, UP Sept. 92, p106-

disc. (of Portrait of a Manager, by Paul Tarricone, CE Aug. 92, p52-54), CE Nov. 92, p36

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see Bucklin, R. A., ST Nov. 90, p3175-3190

Ross, J. David

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Ross, I. J.

Object-Oriented Programming for Scientific Codes. I:
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Object-Oriented Programming for Scientific Codes. II:
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Models for Scientific Applica-

Two Paradigms for OOP Models for Scientific Applicawith a stadigms in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with J. P. Morrow, L. R. Wagner and G. F. Luger, p535-542

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Stresses Induced by Surficial and Deep Loading in Elastic Medium, with Gabriel Auvinet, GT Aug. 92, p1241-

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A Rule-Based System for Evaluating Final Covers for Hazardous Waste Landfills, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), with James T. Decker, p161-175

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Incorporating Corrosion in Reliability-Based Design of Anchored Bulkheads, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with T. C. Sandford and H. J. Dagher, p160-163

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Batter Piles and the Seismic Performance of Pile-Supported Wharves, (Ports '92, David Torseth, ed., 1992), with H. Fong and C. de Rubertis, p336-349

Hydraugers at the Via de Las Olas Landslide, (Stability and Performance of Slopes and Embankments II, Ray-mond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with R. H. Rice, D. T. Liu and J. Cobarrubias, p1349-

Underwater Slope Failure, Port Hueneme, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with D. T. Liu, M. Tischuk and T. Hjort, p940-955

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see Barone, F. S., GT July 92, p1031-1046

Rowe, William

Session Report—Risk Management Software, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p346-347

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When Sewer Rehab Doesn't Stop Basement Flooding, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Kenneth Kelgard,

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Alkali Activation of Class C Fly Ash, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Paul J. Schilling, Harvill C. Eaton and Roger K. Seals, p104-115

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Improving Steep Bends as Hairpin Curves on Mountainous Roads, TE Sept./Oct. 90, p667-682 err. TE July/Aug. 91, p483 disc: A. García G. and M. Conesa L., TE Nov./Dec. 92, p882-884 clo: TE Nov./Dec. 92, p884-888

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see Pulley, John, (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p483-492

Analog Electronic Simulations of a Nonlinear System, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Eric Nauman, p668-

Analytical Methods for the Determination of Correla-tions and Spectra of Nonlinear System Response, (Probabilistic Mechanics and Structural and Geotechni-cal Reliability, Y. K. Lin, ed., 1992), with Pol D. Spanos, p412-415

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Roy, Ospan Inverse Problems in Biomechanics, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Gautam Ray, p980-983

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A Design Method for Reinforced Clay Embankments on Soft Foundations, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1481-1492

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Integrated Assessment of Acid-Deposition Effects of Lake Acidification, with Mitchell J. Small, Cary P. Bloyd and Max Henrion, EE Jan. Feb. 92, p120-134 see Frey, H. Christopher, EY Apr. 92, p38-55

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Contracting and Legal Issues, (Excavation and Support for the Urban Infrastructure, T. D. O'Rouxle, ed. and A. G. Hobelman, ed., 1992), with Jeannette L. Molina, p6-23 In Too Deep, with Jeannette L. Molina, CE Dec. 92, p67-

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Fracture Toughness Model of Fiber Reinforced Ceramics, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p232-235

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Terminal Asphalt Patching: An Innovative Approach,
(Ports '92, David Torseth, ed., 1992), with George Degaraff, p836-848

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see Rawe, Raymond P., (International Air Transportation:
A New International Airport, Robert E. Boyer, ed.,
1992), p109-123

Rule, William K.
Predicting Behavior of Cyclically Loaded RC Structures,
with Robert E. Rowlands, ST Feb. 92, p603-616
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see Leroy, P., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p566-573

Runyon, L. Cheryl
Understanding the High-Level Radioactive Waste Program Through the Cooperative Agreement Process, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Millard Peck, III. and Glenn H. Gardner, p152-155

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Water Quality and Hydrologic Characteristics of a Wet Detention Pond, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p878-

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Russell, Thomas S., Jr.

A Description of LANDSIM and Its Uses, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Mark W. Coe, Robert H. Eltzholtz, Francine M. Hamerski, Judd E. Squitier and Michael E. Zientek, p934-941

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Rusten, Arnfinn
Pier and Wharf for U.S. Navy Homeport, Everett, (Ports
'92, David Torseth, ed., 1992), with Robert L. Wallace,
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Rutherford, Thomas R.

Metrication of Construction—A Message to the American Society of Civil Engineers, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p577-583

Rutledge, Bennett
Building Lunar Roads—An Overview, (Engineering,
Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), p408-415

Rutschmann, P.
Optimum Channel Contraction for Supercritical Flows, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with O. F. Jiménez and M. H. Chaudhry, p754-759

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Rychlik, Igo

Reliability Analysis of Degrading Elasto-Plastic Oscilla-tors, (Probabilistic Mechanics and Structural and Geo-technical Reliability, Y. K. Lin, ed., 1992), with Mircea Grigoriu, p304-307

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snerur Contributions, Sukhanander Singh, ed., 1992), p55-93
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Saatci, A.

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Sabanayagam, S. Traffic Impact Studies for Marriott Corporation Interna-tional Headquarters, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Ed-ward Y. Papazian, p148-153

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Innovations for NDT of Concrete Structures, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Larry D. Olson and Gregory C. Phelps, p519-531

Sack, R. L.

see Ebrahimpour, A., ST Apr. 92, p1121-1136

Sadeh, Willy Z.

Sadeh, Willy Z. Faginering, Construction, and Operations in Space III, 2 vols., with Stein Sture, ed. and Russell J. Miller, ed., 1992, 0-87262-868-X, 2513pp. see Criswell, Marvin E., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2136-2146

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Safayeni, F.

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Saffarini, Hassan S. In-Plane Floor Deformations in RC Structures, with Musa M. Qudaimat, ST Nov. 92, p3089-3102

Sagar, B.

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see Powers, Rodney G., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p732-747

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Saha, Pabitra K.
Thermal Load for p-Version Laminated Elements, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Nesar U. Ahmed and Gautam Saha, p1059-1062

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1992), p200-207

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see Gordaninejad, F., (Materials: Performance and Pre-vention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709

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Sain, P. M.

Sain, P. M. Structural Control Design in the Presence of Time Delays, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with B. F. Spencer, Jr., M. K. Sain and J. Suhardio, p812-815 see Spencer, B. F., Jr., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p369-372

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Saka, Anthony A.
A Guideline for Determining Minimum Threshold Requiring Traffic Impact Studies, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p6-10
LGG System for Emergency Response Applications, SU Aug. 92, p90-98

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A Lisp Based Expert System Tool, (Computing in Civil Engineering and Geographic Information Systems Sym-posium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with M. U. Hosain, p888-895

Sakti, Joni P.

Permeation of Organic Chemicals Through HDPE Geomembranes, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Jae K. Park and John A. Hoopes, p201-207

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Salazar, Guillermo F.
Integrated Approaches for Costing Design Alternatives,
(Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and
Jeff R. Wright, ed., 1992), with Stephanie Foulke and
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see Schwartz, Charles W. (Computing in Civil Engineer-ing and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p368-375

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Analytical Hydraulic Modeling of Road Culverts, (Water Resources Planning and Managemens: Saving a Threat-ened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Ralph Hwang, p798-803

Al Supported Process Planning for Automated Rebar Fabrication, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Leonhard E. Bernold, p872-879

see Braaksma, John P., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p.175-179

see Teeter, Allen, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1012-1017

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see Papadakis, Constantine N., (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2128-2135

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see Hermann, O.W., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1272-1280

see Notz, K. J., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p122-130

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see Paavola, Juha, EM Dec. 92, p2384-2400

Optimum Design of Laminated Composites, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with F. W. Barton and R. D. Ramsey, p1323-

Structural Credit for Depleted Uranium Used in Trasnport Casks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with G. W. Wellman, K. B. Sorenson and P. McConnell, p2241-2248

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Pro-Test Selection of Static Force and Displacement
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Sandau, Rainer

The Wide-Angle Optoelectronic Stereo Scanner WAOSS for the Soviet Mars 94/96 Missions, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Direct Optola 92/21, 2251 with Dieter Oertel, p2241-2251

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Improving Stone Placement Specifications, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p58-63

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see Verzuh, James M., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p51-56

iers, P. J.

Pressuremeter and MDD Moduli for Road Design, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p367-381

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ders, T. L.

see McConnell, P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1174-1180

see Roth, M. J. S., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p160-163

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An Overview of the Yucca Mountain Global/Regional Climate Modeling Program, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Yugal K. Behl and Starley L. Thompson, p1188-1195

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Principles of Ground Modification with Electromagnetic Waves, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Y. N. Wakim, pl 380-1392

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Computational Framework for 3D Nonlinear Discrete
Crack Analysis, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), with R.
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Three Dimensional Modeling of Watershed Hydrology, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with M. L. Kavvas, p391-396

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Sasseneus, Nord. C. Concrete Surface Characterization Using Optical Metrology, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), with Michelle M. Crull, p206-214

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ato, Chikashi

Sato, Chikashi
Hazardous Waste Containment with a Bentonite Cutoff
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Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), with Derek A. Braithwaite, Angelos
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Cleanup of a HLW Nuclear Fuel Reprocessing Center
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Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992),

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Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
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Network Applications of the USGS Branch Model, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1159-1164

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Integrating Traffic and Air Quality Modeling Techniques to Predict Pollutant Concentrations Near Intersections, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p315-326

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see Borovetz, Harvey S., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p713-716

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see Kim, K. W., (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), P466-475

see Luettich, R. A., Jr., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p632-643
see Westerink, J. J., HY Oct. 92, p1373-1390

Scheffner, Norman W.

A Numerical Simulation Approach to Estimating Disposal Site Stability, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), Stephentic Tire Science.

Stochastic Time-Series Representation of Wave Data, with Leon E. Borgman, WW July/Aug. 92, p337-351 see Kim, Keu W., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1003-4500. 1992), p500

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Schelling, D. R.

Evaluation of Impact Factors for Horizontally Curved Steel Box Bridges, with N. H. Galdos and M. A. Sahin, ST Nov. 92, p3203-3221

Scheuernstuhl, George J.

Land Use, Transportation and Air Quality Relationships, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), with Jeffrey H. May, p90-99

Schewe, George J.
Modeling Guideline for Air Quality Analysis of Intersections, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p298-305

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Dynamic Compaction of Nuclear Waste, with Robert G.
Lukas, CE Mar. 92, p64-65
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The Use of Dynamic Compaction to Consolidate Nuclear
Waste, (Grouting, Soil Improvement and Geosynthetics,
Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), with Robert G. Lukas, p1311-1323

see Pane, Vincenzo, (disc), GT Feb. 90, p222-243 see Szavits-Nossan, Vlasta, (disc), GT Feb. 90, p222-243

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Schimmels, S. A.

Nonlinear Geometric and Material Considerations in Shell Structures, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. N. Palazotto, p548-551

Schlatter, G.

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Goodno, ed. and Jeff R. Wright, ed., 1992), p647-

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disc. (of Modeling Construction Labor Productivity, by H. Randolph Thomas, William F. Maloney, R. Mal-colm W. Horner, Gary R. Smith, Vir K. Handa and Steve R. Sanders, CO Dec. 90, p705-726), CO Sept. 92, p626

Schlosser, F.
French Research Program CLOUTERRE on Soil Nailing,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), with P. Unterreiner and C. Plumelle, p739-750

Schmatz, Richard A., Jr.
Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Annual Timescales, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p441-452

Schmeckpeper, Edwin R.
Splice/Development Length Requirements for FRP Grids
Used in the Structural Reinforcement of Concrete,
(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), with
Charles H. Goodspeed, p632-644

Schmeltz, Edward J.
Design of a Mechanical Refuse Barrier, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p680-696

see Yang, David W., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p632-645

Schmertmann, Gary R.
disc. (of Geosynthetic Reinforced Soil Structures, by Dov
Leshchinsky and Ralph H. Boedeker, GT Oct. 89,
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Schmertmann, John H.
A Design Theory for Compaction Grouting, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holiz, ed. and lian Juran, ed., 1992), with James F. Henry, p215-228
The Mechanical Aging of Soils, GT Sept. 91, p1288-1330
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disc: Abraham Ellstein, GT Dec. 92, p2012-2013
clo: GT Dec. 92, p2013-2014
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Schmid, S.

see Johnson, P. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1310-1316

Schmidt, Andrew see Braaksma, John P., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p124-147

Schmidt, James R. see Hajare, Ankur R., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1645-

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Schmidtke, K. Evaluation of Collection-Well Parameters for DNAPL, with E. McBean and F. Rovers, EE Mar./Apr. 92, p183-195

Schmitt, H. H.

Spiral Mining for Lunar Volatiles, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1922), with G. L. Kulcinski, I. N. Sviatoslavsky and W. D. Carrier, III., p1162-1170

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Schmitt, Harrison H.

INTERLUNE Concept for Helium-3 Fusion Development, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p804-814
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Mathematical Zero-Inertia Modeling of Surface Irrigation: Advance in Furrows, with Günther J. Seus, IR
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Schneider, K. J.

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Schneider, Michael L.
Numerical Modeling of Withdrawals at Large Dams, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p341-346
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Schneiter, R. Wane Removing Incentives for Conflict, CE Mar. 92, p6

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Schoellhamer, David H.
Summary of Noncohesive Sediment Transport Processes at the Bed/Water Column Interface, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p375-380

Schoephorater, Richard T.

Numerical Simulations of Diastolic Flow Patterns in a Model Left Ventricle with Varying Degrees of Mitral Stenosis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Erick A. Gonzalez, p968-971

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Projectile Shape and Material Effects in Hypervelocity
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see Giovagnoli, M., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p198-213

1992), p198-213
Schrader, Ernest
see Marulanda, Alberto, (Roller Compacted Concrete III,
Kenneth D. Hansen, ed. and Francis G. McLean,
ed., 1992), p83-98
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1992), p242-257
see Tatro, Stephen, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed.,
1992), p389-406

Schrader, Ernest K.
see Sexton, Donald L., (Roller Compacted Concrete III,
Kenneth D. Hansen, ed. and Francis G. McLean,
ed., 1992), p374-388

ca., 1992), p3/4-386
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Lutes, ed. and John M. Niedzwecki, ed., 1992),
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ed. and John M. Niedzwecki, ed., 1992), p308-311
see Neilsen, M. K., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
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Schrock, B. Jay

Planning, Assessing and Implementing Pipeline Rehabili-tation Options, (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p736-741

see Ritterbach, E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1142-1147

Schroeder, William see Lu, Zhaodong, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p418-429

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Schubert, Frank N.
U.S. Army Corps of Engineers and Afghanistan's Highways 1960–1967, CO Sept. 91, p445–459
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Schueller, G. I.

Schweiner, G. L.
On a Procedure to Estimate the Reliability of Mechanical Components, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with C. G. Bucher and H. J. Pradlwarter, p451-454
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p316-319

Schuepfer, Frederick E. Impact of Breakwater Removal on Hydrodynamics and Water Quality in Flushing Bay, New York, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Guy A. Apicel-la and Les Kloman, p694-706

Schulte, G. Raymond
Sludge Loading Facility at Back River Waste Water
Treatment Plant, (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), with George G. Balog,
Manu A. Patel and Turgay M. Ertugrul, p303-308

Schultbeis, Lex

Artificial Gravity Augmentation on the Moon and Mars, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 738-1747

Schultheis, T. M.

In Situ Testing Program at the Waste Isolation Pilot Plant, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1090-1091

Waste Isolation Pilot Plant Robotic Investigation and Study, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. R. Walls, p960-965

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Approximating Lateral Stiffness of Stories in Elastic Frames, ST Jan. 92, p243-263

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A Systems Approach to Water Recycling Research, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with JoAnn Silverstein, p1996-2007

Space Habitat Environmental Health: A Systems Is (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Ralph N. Eberhardt, p2023-2034

Schulz, W. W.

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Schulz, Wallace W.

Partitioning of Aqueous High-Level Wastes: State-of-the-Art Technology, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), p1718-1723

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see Bjorhovde, Reidar, (disc), ST May 90, p1230-1246

Schuurnans, Wytze
Combined Allocation and Operation Model, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), with Wil
N. M. van der Krogt, p269-274
N. M. van der Krogt, p269-274

Identification of Control System for Canal with Night Storage, with Robert Brouwer and Peter Wonink, IR May/June 92, p360-369

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Shock Pattern at Abrupt Wall Deflection, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions; Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Willi H. Hager, p231-236

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Instructional Modules for Tunnel Design and Construction, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with Herbert H. Einstein and Guillermo F. Salazar, p368-375
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Reasoning, (Computing in Civil Engineering and Geo-graphic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Stuart S. Chen, p277-284

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see Lange, F., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p421-426

Schwarz, Lois G.

Schwarz, Louis.
Geffects of Mixing on Rheological Properties of Microfine Cement Grout, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Raymond J. Krizek,

Schweiger, Michael J. see Hrma, Pavel R., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1236-1243

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Unique Approach to Sludge Management, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p262-268

Schwenk, E. B.

see Smith, H. D., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p620-627

Schwing, Richard C.
Conflicts in Health and Safety Matters: Between a Rock and a Hard Place, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p135-147

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see Hossain, A. S. M. Mustaque, (Road and Airport Pavement Response Monitoring Systems, Vincent C.
Janoo, ed. and Robert A. Eaton, ed., 1992), p276-

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Scott, D. W.

Full Scale Tests on Concentrically Loaded FiberReinforced Pultruded Columns, (Materials: Performance and Prevention of Deficiencies and Failures,
Thomas D. White, ed., 1992), with S. J. Yoon and A.
Zureick, p572-576

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Agricultural Option Contracts, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p138-143

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Microbiologically Induced Corrosion, with Michael Davies, CE May 92, p58-59 disc: J. L. Post, CE July 92, p36

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Scott, Stephen H.

The Application of Ultrasonic Surface Detectors to Hopper Dredge Production Monitoring, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Angela Freeman, p1018-

Scull, Roberta A.

An Interdisciplinary Approach to Learning and Teaching
About Nuclear Waste Management, High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),

Beach Harbors, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with S. Rao Vemulakonda, p551-563

Los Angeles-Long Beach Harbors Model Enhancement Program, (Ports' 92, David Torseth, ed., 1992), with S. Rao Vemulakonda, p851-563

Rao Vemulakonda and James Rosati, III., p884-897

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Seager, Kevin D.
STACE: An Integrated Code for Evaluating Spent-Fuel Transport Cask Containment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Philip C. Reardon and Peter R. Barrett, pl 765-1769
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Engineering Construction, Hilary I. Inyang, ed. and
Kenneth L. Bergeson, ed., 1992), p202-216
see Taha, Ramzi, (Utilization of Waste Materials in Civil
Engineering Construction, Hilary I. Inyang, ed. and
Kenneth L. Bergeson, ed., 1992), p250-263

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Engineering Construction, Hilary I. Inyang, ed. and
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Efficient Sizing of Storm Water Treatment Ponds, (Water Resources Planning and Management: Saving a Threatened Resource—in Search of Solutions, Mohammad Karamouz, ed., 1992), with Brenda van Ravenswaay, p780-785

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disc. (of The Human Factor in Failures, by George F. Sowers, CE Mar. 91, p72-73), CE May 91, p30

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Field Evaluation of Strain Gauges in Asphalt Concrete Pavements, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Nader Tabatabace, p382-396

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Seed, H. Bolton
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Seed, R. B.

Seed, Raymond B.
Seismic Anlaysis and Design of Lined Waste Fills: Current Practice, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Rudolph Bonaparte, Stabilic.

ability and Performance of Slopes and Embankments II, Geotechnical Special Publication No. 31 (2 vols), with Ross W. Boulanger, ed., 1992, 0-87262-872-8,

see Bray, Jonathan D., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p410-417

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see Evans, Mark D., GT June 92, p856-872
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Broadside Current Forces on Moored Ships, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), with David Kriebel and John Headland, p326-

Segall, Burton A. Electroosmotic Contaminant-Removal Processes, with Clifford J. Bruell, EE Jan./Feb. 92, p84-100 see Bruell, Clifford J., EE Jan./Feb. 92, p68-83

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HY Apr. 92, p536-538

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Investigations on Influence of Vibration Parameters on Compacting of Cohesionless Soils, (Grouting, Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p969-

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Highway Construction and a Trout Stream Relocation, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p413-419

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Canada's Green Plan: Unique Approach to Preserving Environment, El Oct. 92, p349-360

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Selwood, Jan R. Use of GIS for Resource Management in Hong Kong. (Computing in Civil Engineering and Geographic Infor-mation Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Peter G. D. Whiteside,

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see Bassett, Britt D., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p18-23

Sen, Zekäi
disc. (of Review of Geostatistics in Geohydrology: I.
Basic Concepts, by ASCE Task Committee on Geostatistical Techniques in Geohydrology of the Ground
Water Hydrology Committee of the ASCE Hydraulics
Division, HY May 90, p612-632) with Ali Subyani, HY
Apr. 92, p638-640

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Sengupta, Arup K. see Ramana, Anuradha, EE Sept./Oct. 92, p755-775

Senneset, Kaare
Deep Compaction by Vibro Wing Technique and Dynamic Compaction, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Jarle Nestvold,

Senouci, Ahmed B. see Eldin, Neil N., CO Sept. 92, p561-576 Sentz, Gerard see Schmidt, John R., (disc), CF Nov. 90, p208-215

Seo, Il Won Modeling Low-Flow Mixing through Pools and Riffles, with W. Hall C. Maxwell, HY Oct. 92, p1406-1423

see Suchiro, James M., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p207-216

Serhan, Samir J.
Soil/Structure Seismic Investigation of Safety-Related
Structures, (Probabilistic Mechanics and Structural and
Geotechnical Reliability, Y. K. Lin, ed., 1992), with Chang Chen, p396-399

Seep, Edward
see Balog, George G., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p429-432

Serrano, Sergio E. Migration of Chloroform in Aquifers, EE Mar./Apr. 92,

erre, Marc

Serre, marc Energy Loss at Combining Pipe Junction, (Hydraulic En-gineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with A. Jacob Odgaard and Rex A. Elder, p766-771.

Turbulence, and Energy Loss, at Combining Pipe Junctions, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. Jacob Odgaard, p389-392

Serventi, Gerald M.
see Egan, John A., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and lian Juran, ed., 1992), p867-878
see Fotinos, George C., (Ports '92, David Torseth, ed.,
1992), p429-442

Seshadri, M. see Pitt, J. M., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p462-475

Setareh, Mehdi
Tuned Mass Dampers for Balcony Vibration Control,
with Robert D. Hanson, ST Mar. 92, p723-740
Tuned Mass Dampers to Control Floor Vibration from
Humans, with Robert D. Hanson, ST Mar. 92, p741762

Using Component Mode Synthesis and Static Shapes for Tuning TMDs, with Robert D. Hanson and Ralf Peek, ST Mar. 92, p763-782

see Jensen, Hector, ST Dec. 92, p3285-3296

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disc. (of Regarding Nature as Raw or Cooked, by Margar-et N. Maxey, CE Oct. 91, p61-63), CE Jan. 92, p29

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Sewards, Joseph see Allen, Linda, ME Oct. 92, p340-345

Sewell, Robert T. see McGuire, Robin K., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1137-1141

Sexton, Donald I Sexton, Donass L. Design of Pena Colorada Tailings Retention Dam, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with James W. Carpenter and Ernest K. Schrader, p374-388

Seymour, Richard J.

Advanced Structures in Very Deep Water, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p948-952

Editor's Preface, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p1-3 Ocean Energy Recovery: the State of the Art, 1992, 0-87262-894-9, 313pp.

State of the Art in Other Ocean Energy Sources, (Ocean Energy Recovery: the State of the Art, Richard J. Sey-mour, ed., 1992), with Preston Lowrey, p258-275

Shear, Maen M.

see Leelani, Pat T., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1042-1053

Shahman, Leonard
Risk Assessment or Engineering Standards: Toward a Decision Framework, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p40-51
What Should the ASCE Model Water Code Committee
Do?, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p237-241

Shabman, Leonard A. see Taylor, Daniel B., (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p148-173

nan, Farhan

see Ramohalli, Kumar, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p714-725

Shafai-Bajestan, M.

disc. (of Pipe Plunge Pool Energy Dissipator, by Fred W. Blaisdell and Clayton L. Anderson, HY Mar. 91, p303-323) with M. L. Albertson, HY Oct. 92, p1449-1452

disc. (of Scour Downstream of Grade-Control Structures, by Noel E. Bormann and Pierre Y. Julien, HY May 91, p579-594) with M. L. Albertson, HY July 92, p1066-1068

Shaffer, Frank

see Borovetz, Harvey S., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p713-716

Shaffer, Gary

Two Examples of Position Estimation, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Ben Motazed, p880-887

Shah, A. H.

see Karunasena, W. M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p556-559

Shah, A. N.

disc. (of The Debate Over Large Dams, by Philip B. Williams and Jan Veltrop, CE Aug. 91, p42-48), CE Feb. 92, p35-36

Shah, D. L.
see Shroff, A. V., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ian Juran, ed., 1992), p651-662
see Shroff, A. V., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p663-675

Dugdale Model Applied to Crack Interactions, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with H. Stolarski and J. F. Labuz, p498-501

Shah, Ketan

see Chen, Stuart S., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1058-1065

see Mohammadi, Jamshid, TE Sept./Oct. 92, p651-665

Francisco of Aggregate-Cement Interface for High Performance Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Z. Li and D. A. Lange, p852-855

see Castro-Montero, A., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p612-615

see Mobasher, B., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p868-871

see Ouyang, C., (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p13-24

Shah, Satish B.

see Omelchenko, Victor, CE June 92, p60-62

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see Tang, Tianxi, ST Nov. 92, p3169-3185

Shahawy, M.
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ed. and John M. Niedzwecki, ed., 1992), p260-263

Shahawy, Mohsen

see Huang, Dongzhou, ST Dec. 92, p3427-3443
see Wang, Ton-Lo, (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p309-316

see Wang, Ton-Lo, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p679-686

see Wang, Ton-Lo, ST Aug. 92, p2222-2238

see Krauthammer, T., ST Apr. 90, p1061-1079

Shahrooz, B. M.

Modeling Slab Contribution in Frame Connections, with S. J. Pantazopoulou and S. P. Chern, ST Sept. 92, p2475-2494

see Miller, R. A., (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p150-161

Shaikh, Aladdin

Hydraulic Properties of a Fine-Grained Soil Under Vari-ous Capillary Pressures and Loadings, (Hydraulic Engi-neering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with John D. Nelson, p648-653

see Ford, Maury E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p642-647

Shair, Robert C.
Wellfield Protection Program in Broward County, Florida, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p69-74

Shaked, O. CONSCHED: Expert System for Scheduling of Modular Construction Projects, with A. Warszawski, CO Sept. 92, p488-506

Shamsai, Abolfazi

Analysis of Recharge in Anisotropic, Layered, Saturated-Unsaturated Soil, with Miguel A. Mariño, IR July/Aug.

Shamsi, Uzair M.

GIS, Remote Sensing, and Master Water Plan: A Case Study, (Computing in Civil Engineering and Geograph-ic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p695-702

Shanan, H. M. see Krauthammer, T., ST Apr. 90, p1061-1079

Shane, Richard M.

see Hauser, Gary E., CE May 92, p64-66

Shankar, N. Jothi

Shanazar, N. John Modelling of Coastal Circulation in Singapore Waters—A Hybrid Approach, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with H. F. Cheong and C. T. Chan, p669-683

Shanley, E. M.

disc. (of Howdy, Partner, by Paul Tarricone, CE Mar. 92, p72-74), CE June 92, p42

Shao, Shaowen see Murotsu, Yoshisada, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p547-550

Shappert, L. B.

Shappert, L. B.
An Assessment of the Transportation Costs of Shipping Non-Fuel Assembly Hardware to FWMS Facilities, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. E. Johnson, D. S. Joy, R. E. Best and F. L. Danese, p190-195

Routine Methods for Post-Transportation Accident Re-covery of Spent Fuel Casks, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. B. Pope, R. E. Best and R. H. Jones, p1855-1859

rope, K. E. Best and K. H. Jones, p1855-1859 see Attaway, C. R., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1386-1342 see Fernandez, Charles, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1345-1348

see Johnson, P. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1310-1316

Sharer, J. C.

see Felice, C. W., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p296-299

Sharma, K. G. Analysis and Implementation of Thin-Layer Element for Interfaces and Joints, with C. S. Desai, EM Dec. 92, p2442-2462

Sharma, Satish C.

Reexamination of Directional Distribution of Highway Traffic, with Awadhesh K. Singh, TE Mar/Apr. 92, p323-337

Sharma, Sunil

Interactive Slope Analysis Using Spencer's Method, (Sto-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Abdul Moudud, p306-520

Sharma, Suresh K.

LAN Ho! Structural Analysis on a Network, (Computing in Civil Engineering and Geographic Information Sys-tems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with John W. Baugh, Jr., p639-646

Sharp, Laura L.

see Ness, Robert O., Jr., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p617-628

Sharp, W. R. see Swint, D. O., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160

See Bricka, R. Mark, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed., and Nani G. Bhowmik, ed., 1992), p1190-1196

Sharp, William R.

See Marks, Bruce S., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2208-2219

Shashidhara, N. see Balasundaram, V., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p567-574

Shaw, Bevil J.

see Emptage, Michael R., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p308-311

Shaw, Hann-Ling see Liang, Robert Y., GT June 91, p913-933

Shaw, R.

Shaw, R.
Performance Assessment for a High-Level Waste Reposi-tory at Yucca Mountain, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. F. Williams, J. C. Stepp and R. McGuire, p869-873

Shaw, R. A.

see Rodwell, E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1373-1380

Shaw, T. L.

Economics of Tidal Power, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p34-41

She, M.

see Hahn, G. D., EM Nov. 92, p2191-2206

Sheall, Ivan L.

see Hales, Lyndell Z., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p370-386

Shearman, James O.
WSPRO, A Model for Water-Surface PROfile Computa-tions, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p865

Sheats, Dennis G.

Records Management in Support of the Licensing Process for the High Level Radioactive Waste Facility, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2083-2087

Sheehan, John M.

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Sheer, Daniel P.

Managing Lower Colorado River, with Timothy J. Ulrich and Mark H. Houck, WR May/June 92, p324-336

Shelkh, Shamin A.

Analytical Moment-Curvature Relations for Tied Concrete Columns, with C. C. Yeh, ST Feb. 92, p529-544

see Frostig, Y., EM May 92, p1026-1043

Shekarian, Majid

Frictional Aspect of Rocking-Sliding of a Rigid Block with Surface Impact, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Joel P. Conte and Pol D. Spanos, p328-331

belden, Jeffrey G.

Investigation of Coastal Conditions at Oregon Inlet, NC for the Replacement of the Herbert C. Bonner Bridge, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with John R. Lesnik and M. Anthony Young, p537-553

Shelke, M. P.

see Phatak, D. R., (disc), GT Dec. 90, p1902-1906

Shelton, Paul
see Maddigan, Ruth, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1330-1335

Shen, Hayley H.

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D. Lutes, ed. and John M. Niedzwecki, ed., 1992),
p1031-1034

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Shen, Hsieh Wen
Physically Based Flood Features and Frequencies, with
Gregory John Koch and Jayantha T. B. Obeysekera,
HY Apr. 90, p494-514
diss: Tommy S. W. Wong, HY Apr. 92, p637-638
see Jan, Chyan-Deng, (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
p768-771

see Ling, Chi-Hai, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p764-767

Shen, Zuyan Nonlinear Stability Analysis of Steel Members by Finite Element Method, with Qilin Zhang, EM Mar. 92,

eng, Grant

see Cronhjort, Bjorn T., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2122-2125

ag, Y. P.
Peene, S. J., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p357-369

Sheng, Y. Peter
Modeling Three-Dimensional Circulation and Sediment
Transport in Lakes and Estuaries, (Estuarine and
Coastal Modeling, Malcolm L. Spaulding, ed., Keith
Bedford, ed., Alan Blumberg, ed. Ralph Cheng, ed. and
Craig Swanson, ed., 1992), with D. E. Eliason and X.-J.
Chen, p105-115

A Review of Mathematical Models for Fine Sediment Transport Processes, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p381-385

Shenk, K. J.

Radiological Environmental Monitoring for the Yucca Mountain Site, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. K. Prince and C. D. Sorensen, p2313-2317

Shenoy, S.
see Vipulanandan, C., (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p500-511

Shenton, H. W., III. see Lin, A. N., EM May 92, p921-941

Shenton, Harry W., III.
Multiple Modes of Steady-State Slide-Rock Response,
(Engineering Mechanics, Loren D. Lutes, ed. and John
M. Niedzwecki, ed., 1992), with Nicholas P. Jones, p312-315

Shepard, Nona F.
The Yucca Mountain Tours: A Test of the Familiarity Hypothesis, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Donald L. Champagne, p393-399

egardson, Don Warner, James, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p252-264

Shephard, L. E. see Fewell, M. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670

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Sherard, J. L.
Critical Filters for Impervious Soils (Paper introduced by Lorn P. Dunnigan), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with L. P. Dunnigan, p533-554
Potentially Active Faults in Dam Foundations (Paper introduced by Clarence R. Allen), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with L. S. Cluff and C. R. Allen, p204-266

p204-266
Some Engineering Problems with Dispersive Clays (Paper introduced by Lorn P. Dunnigan), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with L. P. Dunnigan and R. S. Decker, p301-311
Trends and Debatable Aspects in Embankment Dam Engineering (Paper introduced by Edward B. Perry), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p403-410

Basic Properties of Sand and Gravel Filters (Paper intro-duced by James R. Talbot), (Embankment Dams-James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with Lorn P. Dunnigan and James R. Tal-bot, p366-383

DOI, p. 906-3-8.
Concrete-Face Rockfill Dam: I. Assessment (Paper introduced by J. Barry Cooke), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with J. Barry Cooke, p.494-511

ed., 1992), with J. Barry Cooke, p494-511
A Current Review of Experience with Asphaltic Concrete Impervious Membranes on the Upstream Slope of Earth and Rockfill Dams, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p10-29
Earthquake Considerations in Earth Dam Design, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p30-54
Embankment Dam Cracking (Paper introduced by Ronald C. Hirschfeld and Steve J. Poulos), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p120-203
Filters and Leakage Control in Embankment Dams—(Paper introduced by Lorn P. Dunnigan), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with Lorn P. Dunnigan, p411-444

Sukhanander Singh, ed., 1974), with seeing 1411-441
Filters for Silts and Clays (Paper introduced by James R. Talbot), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with Lorn P. Dunnigan and James R. Talbot, p384-402
Hydraulic Fracturing in Embankment Dams (Paper introduced by Edward B. Perry), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p442-469
Hydraulic Fracturing in Low Dams of Dispersive Clay

Singh, ed., 1992), p442-469

Hydraulic Fracturing in Low Dams of Dispersive Clay
(Paper introduced by Norman L. Ryker), (Embaniment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with Rey S. Decker and Norman L. Ryker, p94-119

Identification and Nature of Dispersive Soils (Paper introduced by Lorn P. Dunnigan), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with Lorn P. Dunnigan and Rey S. Decker, p285-300

Piezometers in Earth Dam Impervious Sections (Paper

Piezometers in Earth Dam Impervious Sections (Paper introduced by R. W. Beene and Clifford LeRoy McAnear). (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p324-365.

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Pinhole Test for Identifying Dispersive Soils (Paper introduced by Lorn P. Dunnigan), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with Lorn P. Dunnigan, Rey S. Decker and Edgar F. Steele, p267-284
Piping in Earth Dams of Dispersive Clay (Paper introduced by Norman L. Ryker), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), with Rey S. Decker and Norman L. Ryker, p55-93
Rockfüll Dams: Steel-Faced Dam (Paper introduced by J. Rockfüll Dams: Steel-Faced Dam (Paper introduced by J.

p33-y3 Rockfill Dams: Steel-Faced Dam (Paper introduced by J. Barry Cooke), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p1-9 Sinkholes in Dams of Coarse, Broadly Graded Soils (Paper introduced by Jean Lafleur), (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p312-323

The Upstream Zone in Concrete-Face Rockfill Dams, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p470-493 see Cooke, J. Barry, (Embankment Dams—James L. Sherard Contributions, Sukhanander Singh, ed., 1992), p512-532

Sherbourne, A. N. see Lu, F., EM Sept. 92, p1840-1849

Sherbourse, Archibald N.
Postbuckling of Polar Orthotropic Circular Plates— Retrospective, with Mahesh D. Pandey, EM Oct. 92, p2087-2103

see Pandey, Mahesh D., EM June 92, p1249-1266

Sheridas, Michael F.

A Monte Carlo Technique to Estimate the Probability of Volcanic Dikes, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2033-2038

Sheria, Jay E.
see Keller, C. Richard, (Site Impact Traffic Assessment:
Problems and Solutions, Robert E. Paaswell, ed.,
Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992),
p32-36

Sherman, D. R. see Bjorhovde, Reidar, (disc), ST May 90, p1230-1246

Sherrard, Joseph H. see Rendon-Herrero, Oswald, El Oct. 92, p415-419

Sherwood, Brent
Mars Basing, (Engineering, Construction, and Operations
in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1964-1975
Technical Issues for Lunar Base Structures, with Larry
Toups, AS Apr. 92, p175-186

Sherwood, James A.
Constitutive Modeling and Simulation of Energy Absorbing Polyurethane Foam Under Impact Loading, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Colin C. Frost, p155-158

Shetty, K. G.
see Banks, M. K., (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p463-467

Sheu, C. see Juang, C. H., GT Mar. 92, p475-494

see Juang, C. H., GT Mar. 92, p475-494
Sheu, Kathlie S. Jeng
Feasibility of Water Supply for City of Houston Subsidence Zones Five and Six, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), with Jerry Rogers and William P. Bulloch, p480-485
Houston Intercontinental Airport Water Service Area Systems Analysis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Jerry Rogers and William P. Bulloch, p587-592
Shewhides Scott

Shewbridge, Scott disc. (of Strain Compatibility Design Method for Rein-forced Earth Walls with Metallic Reinforcements, by llan Juran and Chao L. Chen, GT Apr. 89, p435-456) with Nicholas Sitar, GT Feb. 92, p318-321

Shewbridge, Scott E.

Shear Zone Formation and Slope Stability Analysis, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Nicholas Sitar, p358-370

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Dynamic Fish Growth Modeling for Tailwater Fishery
Management, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 192), with Gary
Hauser, Gary Chapman, Bruce Yeager, Tom
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Shih, Jahk-Shyang
Water Supply Operations During Drought, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Charles ReVelle, p310-315

Shih, Sun F. Applications of Remote Sensing to Drainage, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Edwin T. Engman and Christopher Neale, p547-552
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imada, Shunsuke

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see Gazetas, G., (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93

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Shia, Eun C.
Site Improvement for a Steel Mill Complex, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and lian Juran, ed., 1992), with Bang W. Shin and Braja M. Das, p816-828

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Shinozuka, M.

Shindran, vi.
Impact on Water Supply of a Seismically Damaged Water
Delivery System, (Lifeline Earthquake Engineering in
the Central and Eastern U.S., Donald B. Ballantyne,
ed., 1992), with H. Hwang and M. Murata, p43-57

Shinozuka, Masanobu
Regional Evaluation of Transportation Lifelines in New
York State with the Aid of GIS Technology, (Lifeline
Earthquake Engineering in the Central and Eastern
U.S., Donald B. Ballantyne, ed., 1992), with Michael P.
Gaus, Seong H. Kim and George C. Lee, p102-1679
see Deodatis, George, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p272-275
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see Zhang, Ruichong, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p196-199

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Shipler, D. B.

Overview of the Hanford Environmental Dose Recon-struction Project, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Management Program Committee, 1992), with B. A. Napier and T. A. Ikenberry, pl 200–1204

Shipler, Dillard B.

Super, Journe B.

see Woods, Thomas W., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1724-1729

Shipley, Derek E.
LIAC: A Closed Ecosystem Research Facility, (Engineering, Construction, and Operations in Space III, Willy Z.
Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed.,
1992), with Mark S. Miller, Jeffrey D. Smith and Marvin W. Luttges, pl 765-1776

Shirahama, Kenji

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Timoshenko Beam Element Resting on Two-Parameter Elastic Foundation, with M. W. Giger, EM Feb. 92, p280-295

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Water Quality Implications of Encapsulated Atrazine, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Timothy J. Gish and Raviraj Vyravipillai, p425-430

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Shoaf, Stephen R.

Alkaline Sludge Stabilization: A "Quick Fix" and Long Term Sludge Management Option for Burlington, North Carolina, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Morris V. Brookhart and Gary S. MacConnell, p399-404

naker, Christine A.

see Ong. Say Kee, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p176-179

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Shrestha, Surendra P. disc. (of Recurrence Interval of Geophysical Events, by Hugo A. Loaiciga and Miguel A. Mariño, WR May/ June 91, p367-382) with Bijaya P. Shrestha, WR July/ Aug. 92, p468-470

Aug. 92, p468-470

Shroff, A. V.
Chemical Based Cement Grout System for Rock Grouting, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with D. L. Shah, p651-662

Time-Viscosity Relationships of Newtonian and Binghamian Grouts, Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with D. L. Shah, p663-675

Shrouds, James M.
Transportation Planning Requirements of the Federal
Clean Air Act Amendments (CAAAs) of 1990: A Highway Perspective, (Transportation Planning and Air
Quality, Roger L. Wayson, ed., 1992), p14-29

Shukla, A.

Dynamic Stresses in Granular Assemblies with Micro-structural Defects, with C. Y. Zhu and Y. Xu, EM Jan. 92, p190-201 err: EM May 92, p1060

Shuler, Scott Successful High Traffic Chip Seal Construction, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p186-205

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see Wang, O. S., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p416-420

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Shuter, Kelli A.

see Chieh, Shih-Huang. (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p248-253

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Energy Dissipation Characteristics of Rubber Cylinders, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p139-142

Siddharhaa, Raj
On the Influence of Seismically Induced Residual Forces
on Bridge Abutment Design, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), with Mahmoud El-Gamal, p51-54
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Sidle, R. C.

disc. (of Probabilistic Analysis of Groundwater Levels in Hillside Slopes, by Lakshmi N. Reddi and Tien H. Wu, GT June 91, p872-890), GT Oct. 92, p1654-1656

Slebes, Maria

ressure Losses Across Sequential Stenoses in Collapsible Tubing, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Binu John, p832-835

Siegel, Gary W.
Water Reduction as Justification for Permit Backsliding, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Margaret L. Dwyer, p151-156

Siegel, M. D.

esign of an Intermediate-Scale Experiment to Validate Unsaturated-Zone Transport Models, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with P. L. Hopkins, R. J. Glass and D. B. Ward, p1972-1984

Siegel, Rosald A.
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Design Criteria for an Underground Lunar Mine, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), pl 183-1194
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disc. (of Incremental Collapse of Structures with Constant Plus Cyclically Varying Loads, by Sidney A. Guralnick, Thomas Erber, Osama Soudan and Jixing He, ST June 91, p1815-1833), ST Sept. 92, p2630-2631

Siemon, Charles L.

The Application and Use of Impact Fees: Legal Issues, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p238-243

Sienkiewich, Andrew

Groundwater Recovery Program for Southern California, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p242-247

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ignell, Richard P.

Tide- and Wind-Driven Flushing of Boston Harbor, Mas-sachusetts, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p594-606

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Silde Stabilization with Stone-Fill Trenches, (Stability
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ee Chaturvedi, Lokesh, (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p600-609

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Silver, Andrew L. Environmental Monitoring and Operator Guidance Sys-tem (EMOGS) for Shallow Water Ports, (Ports '92, David Torseth, ed., 1992), p535-547

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Simmons, Thomas M.
see Nocera, John J., (Environmental Engineering: Saving
a Threatened Resource—In Search of Solutions, F.
Pierce Linawaver, ed., 1992), p92-97

Simon, Marcia J. disc. (of The Roads Ahead, by Teresa Austin, CE Apr. 92, p54-57), CE June 92, p37

Simon, N. S.
Flux of Metals Between Sediment and the Water Column,
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and Nani G. Bhowmik, ed., 1992), with K. O. Dennen, p390-391

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Challenges of The Changing Profession, El Jan. 92, p1-9
Reservoir Systems Analysis: Closing Gap Between Theory and Practice, WR May/June 92, p262-280

Simons, Bryce Improper Uses of Construction Specifications, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p316-324

Simons, Daryl B.

Future Trends and Needs in Hydraulics, HY Dec. 92, p1607-1620

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856

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Concrete for Sealing Voids in Rubble Structures, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with B. D. Neeley and D. M. Walley, p847-861

Simpson, David P. see Da Costa, Steven L., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p154-169

Importance of the Tropical Rainfall Measuring Mission (TRMM) Satellite to Hydrological Investigations, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p523-528

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Šimusović, Srdan Frictionless Contact with BEM Using Quadratic Pro-gramming, with Sunil Saigal, EM Sept. 92, p1876-1891

clair, Carter

see Basco, David R., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1003-1020

Sinclair, Jennifer L. Influence of Gas Phase Turbulence on the Transport of Particles, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1039-1042

and John M. Niedzweck, ed., 1992), p1039-1042
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Stable Channel and Environmental Design Considerations for an Urban Flood Control Project, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Daniel Pridal and Thea Lane, p464-469
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Singh, Ajeet
Characterization of the Topopah Spring and Tiva Canyon
Tuffs at Yucca Mountain, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with Shamsuddin liss and Gary Tatterson, p1953-1958
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Management, High Level Radioactive Waste Management Program Committee, 1992), p1946-1952

Singh, Amarjit Experience-Based Issues in Construction Education, El Oct. 92, p388-402

Oct. 92, p388-402

Planning for Construction Automation by Integrating Information Flow with Software and Hardware Controls, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p856-863

Tests on the Application of CAN-Q to Construction Process Modeling, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p199-206

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Singh, Krishan P.

dequacy of Surface Water-Supply Systems: Case Study, with Sally M. Broeren and Ali Durgunogiu, WR Nov. J Dec. 92, p620-635

Predicting Sediment Loads, with Ali Durgunoglu, CE Oct. 92, p64-65

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Lutes, ed. and John M. Niedzwecki, ed., 1992), p920-923

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gh, Sukhanander

Singa, Sunmanager Embankment Dams—James L. Sherard Contributions, Geotechnical Special Publication No. 32 (Sherard Memorial Volume), 1992, 0-87262-897-3, 590pp.

Singh, Sukhmander

Stability Evaluation of an Old Dam With a Known History of Slide, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Robert D. Darragh, p1033-1049

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Derivation of Infiltration Equation Using Systems Approach, with F. X. Yu, IR Nov/Dec. 90, p837-858 disc: Cheng-lung Chen, IR Nov/Dec. 92, p996-999 clo: IR Nov/Dec. 92, p999-1001

alue Engineering at a Superfund Site, with Amy Monti, CE Mar. 92, p60-63

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Sitar, Nicholas

Conditions for Initiation of Rainfall-Induced Debris Flows, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Scott A. Anderson and Ken-neth A. Johnson, p834-849

see Shewbridge, Scott E., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p358-370 see Shewbridge, Scott, (disc), GT Apr. 89, p435-456

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The Clean Air Act: Opportunities for the Transit Indus-try, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p64-75

Siwula, John M.

Permanence of Grouted Sands Exposed to Various Water Chemistries, (Grouting, Soil Improvement and Geosyn-thetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Raymond J. Krizek, p1403-1419

Shaggs, R. W.

Environmental Impacts of Agricultural Drainage, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with M. A. Breve and J. W. Gilliam, p19-24 see Konyha, K. D., IR Sept./Oct. 92, p807-819 see McCarthy, E. J., IR Mar./Apr. 92, p242-255 see Munster, C. L. (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p419-424

Raglus, Kristina ee Andersson, Johan, (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1414-1420

Skarzyaska, Krystyna M.
Coal Mine Waste Formation and Changes of Microstructure Under Artificial Salting, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Maria Porebska, p60-70

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See Gruninger, Robert M., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p275-280

disc. (of Construction under Fire, by Ralph D. Ellis, Jr., CE Nov. 91, p51-53) with Ed Maurer, CE May 92, p35

Skoblar, Leonard T. Licensing Code-of-Practice, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1055-1061

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Slade, Louis J.

State, Louis J. Transportation Management in the Anacostia Waterfront Washington, D.C., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), pl 59-163

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Sloss, J. M.
Design/Control Optimization of Cross-Ply Laminates under Buckling and Vibration, with I. S. Sadek, J. C. Bruch, Jr. and S. Adali, AS Jan. 92, p127-137

n the Role of Dispersive Waves in Strain-Softening Media, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with R. de Borst, p624-627

Smailos, E.

Corrosion of HLW Packaging Materials in Disposal Relevant Salt Brines, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. Köster, p1676-1680

Small, Mitchell

Small, Mitchell Session Summary—Behavioral, Social, and Institutional Aspects of Risk Analysis, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p355-357

Small, Mitchell J.

Hintegrated Assessment of Environmental Risk and Human Response, (Risk-Based Decision Making in Water Resources V, Yaov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p78-91 see Rubin, Edward S., EE Jan./Feb. 92, p120-134

Small, William H.
New Seoul Metropolitan Airport, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p155-162

Smartt, Raymond N.

Some Considerations for Instrumentation for a Lunar-Based Solar Observatory, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1890-1901

edema, L. K.

Reuse Simulation in Irrigated River Basin, with W. Wolters and P. J. Hoogenboom, IR Nov/Dec. 92, p841-851

Smilow, Jeffrey Ultimate Air Rights, CE Nov. 91, p38-41 disc: Irwin G. Cantor, CE Jan. 92, p29

An Example of Rubble Mound Construction Procedures, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), with L. Angus Jackson, p138-150

mith, Alec D.

Design of the Charter Oak Bridge Embankments, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p721-736

Smith, C. F.

see Nilson, R. H., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p710-716

Smith, Charles L.

Smith, University Engineering Properties are Controlled by Disposal Choice, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p44-59

Smith, D. W.

see Stanley, S. J., CR June 92, p58-72

Smith, Daniel W. disc. (of Civil Engineering Education: Case Study Ap-proach, by Jeffrey S. Russell and Bob G. McCullouch, El Apr. 90, p164-174), El Apr. 92, p210-211

Smith, David Lloyd see Chuang, Poon-Hwei, ST Jan. 92, p90-107

Smith, Donald E.

see Hrma, Pavel R., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1236-1243

Smith, Douglas M.

see Gallegos, David P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p738-745

Smith, Frank S.

see Wolf, Steven H., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p226-231

Smith, G. J.
Space Habitat Contaminant Growth Models—Part II,
(Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with T. McAdams, W. F. Ramirez and G. W. Morgenthaler, p1370-1378

Smith, G. R.

Santh, v. R.

Santhy Programs and The Construction Manager, with R.

D. Roth, CO June 91, p360-371

disc: Jimmie Hinze and Anne Kusaka, CO Sept. 92, p629-630

clo: CO Sept. 92, p630-631

Smith, Gary R.

Construction Applications of Vision Systems, (Comput-ing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with H. Randolph Thomas and Wil-liam Gleba, p476-483.

see Thomas, H. Randolph, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992, p492-499
see Thomas, H. Randolph, CO Dec. 90, p705-726
see Thomas, H. Randolph, CO Sept. 92, p472-487
see Thomas, H. Randolph, CO Dec. 92, p767-779

Smith, Gary W.

Naval Homeport Facilities at Pensacola, Florida, and Mobile, Alabama, (Ports '92, David Torseth, ed., 1992), with Charles H. Evans, III. and Michael A. Knott, p630-643

Smith, Graham M.

Taking Account of the Biosphere in HLW Assessment, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Com-mittee, 1992), with Helen A. Grogan, p2306-2312

Nonlinear Eigensolver for Exact Vibration Analysis, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with D. C. Sorensen and R. K. Singh, p920-923

Smith, H. D.

Corrosion Resistance of Stainless Steels and High Ni-Cr Alloys to Acid Fluoride Wastes, (High Level Radioac-tive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with K. H. Pool, D. B. Mackey and E. B. Schwenk, p620-627

disc. (of Finite-Strip Free-Vibration Analysis of Wood Floors, by A. Filiatrault, B. Folz and R. O. Foschi, ST Aug. 90, p2127-2142) with Y. H. Chui, ST May 92, p1428-149.

Smith, Ian M.

see Noorany, Iraj, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257

Nonparametric Framework for Long-Range Streamflow Forecasting, with G. N. Day and M. D. Kane, WR Jan./Feb. 92, p82-92

Smith, James A.
Hydraulic Conductivity of Landfill Liners Containing
Benzyltriethylammonium-Bentonite, (Environmental
Engineering: Saving a Threatened Resource—In Search
of Solutions, F. Pierce Linaweaver, ed., 1992), with
Pamela M. Franklin and Peter R. Jaffé, p186-191

Smith, James L.

see Fornstrom, K. James, (Irrigation and Drainage: Sav-ing a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p389-394

mith, Jane McKee

Smith, Jame Mckee
Field Verification of a Wave-Induced Current Model, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p95-104
Shoaling and Decay of Two Wave Trains on Beach, with Charles L. Vincent, WW Sept./Oct. 92, p517-533

Smith, Jason

Streamflow Forecasting Using Trainable Neural Networks, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Robert N. Eli, p56-61

Smith, Jay L.

Needed Geologic and Seismic Rulemaking for HLW Re-positories, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), p685-690

Smith, Jeffrey D.

see Shipley, Derek E., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1765-

nith, Jeffrey H.

Spaceborne Construction and Operations Planning: Decision Rules for Selecting EVA, Telerobot, and Combined Work-Systems, [Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1988-1995

see Dias, William C., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p357-

Smith, John R. see Beckham, Harvey C., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p428-433

Smith, Kelly see Romine, Russell, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), pl 46-159

Smith, Kenneth E., see Leidersdorf, Craig B., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p745-761

Smith, Lowell Kent

An Introduction to GIS, with Tracy Lenocker, CC Nov. 92, p1-6

Sources of GIS Data, with Tracy Lenocker, CC Nov. 92, p7-8

Smith, Marvin

see Stuart, Ivan, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1231-1235

mith, Marvin L.

Universal Storage/Transport/Disposal Packages, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p228-232

Smith, Maureen T.
see Palo, Paul A., (Civil Engineering in the Oceans V,
Robert T. Hudspeth, ed., 1992), p273-287

Smith, Michael Lee

Planning Your Negotiation, ME July 92, p254-260 disc. (of Performance Evaluations: Key to People Development, by Everett S. Thompson, ME Oct. 90, p373-377), ME Jan. 92, p100-101

Smith, Mike E. see Hutson, Nick D., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p541-548

Smith, Moses, III. see Evans, John R., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2372-2380

Smith, P. A. see McKinley, I. G., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1770-1776

Smith, P. E.

Data Set for Verification of 3-D Free-Surface Hydrodynamic Models, Carquinez Strait, California, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmis, ed., 1992), with R. N. Oltmann and M. R. Simpson, p430-435

Smith, Perry L. Professionalism: Cornerstone of Engineering, El July 92, p258-260

mith, Philip E.

Smith, Philip E.
In-Vessel Compost Systems: Technology Status, (Environmental Engineering: Saving a Threatened Resource—
In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Gary S. MacConnell, p291-296
see MacConnell, Gary S., (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p394-398

Smith, Robert J.
Smith, Robert J.
Cost Effective Risk Allocation for Coastal Engineering Projects, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1021-1036
disc. (of Protecting Engineer Against Construction Delay Claims: NDC, by David M. Leishman, ME July 91, p314-333) with Robert A. Rubin, ME Oct. 92, p396-397

Smith, Roger H.
A GIS Based Synthetic Watershed Sediment Routing Model, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Surya N. Sahoo and Larry W. Moore, p200-23, with Surya N. see Uyumaz, Ali, IR Jan./Feb. 91, p79-90

see Branch, K., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p156-160

see Piggott, Terry, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p254-267

Smith, Steven J.
see Bank, Lawrence C., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p884-887

ith, Th Smith, Thomas A. see Aron, Gert, IR Sept./Oct. 91, p635-641

Smolen, John see Rongoe, James, (disc), CF Nov. 90, p208-215

Smolen, Michael D.
Oklahoma's Ground Water Protection Strategy, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Patricia E. Norris, p98-103

Smolinski, Susan L. see Marshall, Peter W., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p258-272

Discrete Fracture Simulations of the Hydrogeology at Koongarra, Northern Territory, Australia, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p345-351

Smutzer, David A.

Social-Economic Impacts of the October 1983 Flood in Pima County, Arizona, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1072-1075.

Snell, Bill see Liska, Roger W., CO Dec. 92, p667-676

Snell, Cyril see Platt, John, EM Mar. 92, p481-495

Sniady, Pawel
Random Vibration of the Viscoelastic Structure under Series of Stochastic Excitations, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Stanislaw Zukowski, p152-155

Saow, Robert E.
see Mann, Michael J., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p923-939

Sayder, D. see Huston, D., (Nondestructive Testing of Concrete Ele-ments and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p60-69

Snyder, David L.

Controlling the Flow of Recyclable Material, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992, p9-21

Sayder, Julian see Schmidt, John R., (disc), CF Nov. 90, p208-215

Sayder, K. A. see Natesaiyer, K., MT May 92, p166-184

Snyder, Mark B.

see Marcondes, Jorge A., TE Jan./Feb. 92, p33-49

Snyder, R. L.

Evapotranspiration Data Management in California, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with W. O. Pruitt, p128-133

nyder, Richard I...

Equation for Evaporation Pan to Evapotranspiration Conversions, IR Nov./Dec. 92, p977-980

Sayder, Willard M.
see Mills, W. Carlisle, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p372-377

bey, Rodney J. apidly Varied Flow Analysis of Undular Bore, wit Maarten W. Dingemans, WW July/Aug. 92, p417-436

Sobolik, S. R. see Fewell, M. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p665-670

Sochacki, James see Ewing, Richard, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p111-114

Software Publishers Association
The Software License Minefield, CC June 92, p6-8,14-15

Inelastic Amplification Factor for Design of Steel Beam-Columns, with N. A. Syed, ST July 92, p1822-1839

Soha, Joon-lk
Factors Influencing Passive Pullout Resistance, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Soo-Il Kim, Young-Jin Kim and Dong-Deok Yoon, p1153-1162

Sohn, Young G. see Ayyub, Bilal M., ST Oct. 92, p2743-2762 see Ayyub, Bilal M., ST Oct. 92, p2763-2783

Sokhey, Amarjit Sokhey, Amarju see Balog, George G., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p287-290 see Burns, Bruce B., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p30-35

Sokhey, Amarjit S.
see Andryszak, Robert J., (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p617-622

Solan, S. See Swint, D. O., (Engineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160

Soliman, Afffi H. see Gadi, Ahmed M., TE Sept./Oct. 92, p729-743

Soliman, M.

Soulman, 71.
Groundwater Quality Model with Applications to Various Aquifers, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with A. Hassan, p269-274

Soliman, Mohamed see Kennedy, John B., ST Sept. 92, p2610-2623

Sollitt, Charles K.
see Thompson, Gary O., (Civil Engineering in the Oceans
V, Robert T. Hudspeth, ed., 1992), p129-148

Soltani, Mehrdad see Riba-Ramirez, Ramon, ST Feb. 92, p596-602

Soltesz, John P. disc. (of Water's New World, by Laura Lang, CE June 92, p48-50), CE Sept. 92, p36

Soltis, Lawrence A.

see Fridley, Kenneth J., ST Feb. 92, p567-581 see Fridley, Kenneth J., ST Apr. 92, p1023-1038 see Fridley, Kenneth J., ST Aug. 92, p2261-2277 see Fridley, Kenneth J., ST Sept. 92, p2351-2369

Soltys, Peter W.
Sylvan Beach Pier Rehabilitation Study, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p646-662

Somaki, Takahiro

see Hirata, Kazuta, (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p57-60

Somasuadaram, Saji Seismic Retrofit Analysis of a Homogeneous Earthfill Dam, (Stability and Performance of Slopes and Em-bankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Kris S. Khilmani and Geof-frey R. Martin, p669-684

Sombret, C. G.

See Moncouyoux, J. P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2406-2409

Charles C. S.

see He, Jianming, EM Nov. 92, p2282-2297

ong, Chongmin e Wolf, John P., (*Piles Under Dynamic Loads*, Shamsh-er Prakash, ed., 1992), p94-113

Song, Ol-gen
Formulas for Shear-Lag Effect of T-, and I-, and Box
Beams, with Alexander C. Scordelis, ST May 90,
p1306-1318 disc: Andrej Belica, ST Apr. 92, p1148-1150

Songer, Anthony D. Knowledge-Based Advisory System for Public-Sector De-sign-Build, with C. William Ibbs, James H. Garrett, Thomas R. Napier and Annette L. Stumpf, CP Oct. 92,

see Kuprenas, John A., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p182-189

Sonnad, V. see Hassanzadeh, S., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p762-769

disc. (of Overseas Perspectives for Managing Irrigation Drainage in California, by Emery M. Roe, IR May/ June 91, p350-360), IR Sept./Oct. 92, p837-839

to, Sweatum esign Method for Frozen-Soil Retaining Wall, with B. B. Muvdi, CR June 92, p73-89

Suoug, T. T.

Soong, T. T.

see Chang, K. C., ST July 92, p1955-1973

see Chen, G., EM May 92, p1046-1051

see Riley, M. A., (Engineering Mechanics, Loren D.

Lutes, ed. and John M. Niedzwecki, ed., 1992),

see Wang, Y. P., EM June 92, p1201-1220

see Zhang, Ri-Hui, ST May 92, p1375-1392

See Lang, Ki-riui, Si May 72, p. 578-78-78.

Soong, Ta Wei
Characteristics of Waves and Drawdown Generated by
Barge Traffic on the Upper Mississippi River System,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), with Nani G. owmik, p672-676

see Bhowmik, Nani G., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p760-765

Soong, Yingilan see Lin, Shaopei, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p991-998

Sorensen, C. D. see Shenk, K. J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2313-2317

Sorensen, D. C. see Smith, H. A., (Engineering Mechanics, Loren D. Luces, ed. and John M. Niedzwecki, ed., 1992), p920-923

Sørensen, J. D.
Risk Based Optimal Fatigue Testing, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y.
K. Lin, ed., 1992), with M. H. Faber and I. B. Kroon, p523-526

Sorensen, Mark
see Corwin, Dennis L., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p468-475

Sorensen, Paul see Chilcote, Paul, (Ports '92, David Torseth, ed., 1992), pl-14

Sorensen, Robert M. Field Monitoring of a Modular Detached Breakwater Sys-tem, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with J. Richard Weggel, pl 89-204

Sorensea, Torben disc. (of Breakwater Breakthrough—Bold New Breakwat-ers, by William F. Baird, Kevin Hall and Virginia Fair-weather, CE Jan. 87, p45-48), CE Apr. 87, p36

Sorenson, K. B. see Salzbrenner, R., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2241-2248

Sorenson, Torben disc. (of Breakwater Breakthrough—Bold New Breakwaters, by William F. Baird, Kevin Hall and Virginia Fairweather, CE Jan. 87, p45-48), CE Sept. 92, p37-38

Sorokin, V. T.

Soroam, V. 1. see Kurnosov, V. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2387-2394

Technology—Key to Environmental Success, (Ports '92, David Torseth, ed., 1992), p189-202

David Torseth, ed., 1992), p167-202

Soroushian, Parviz

Analytical Modeling of Bonded Bars under Cyclic Loads, with Kienuwa Obasaki and Shashidhara Marikunte, ST Jan. 91, 948-60

disc: John F. Bonacci and H. Tugrul Ustuner, ST Sept. 92, p2626-2628

Clo: ST Sept. 92, p2628

Moisture Effects on Flexural Performance of Wood Fiber-Cement Composites, with Shashidhara Marikunte, MT Aug. 92, p275-291

Sotir, Robbin B.

see Gray, Donald H., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1395-1410 see Gray, Donald H., GT Sept. 92, p1395-1409

New Design Chart for Reinforced Embankments, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with C. Coulet and D. Rakotondramanitra, p1163-1174

Sonbrier, Géraud see Fach, Roland, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), pl112-1117

Souchon, Yves
see Milhous, Robert T., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p362-367

Soudan, Osama see Guralnick, Sidney A., ST June 91, p1815-1833

See Ouramick, Staney A., S. F. June 91, p1815-1835.

Souleyretts, Reginale R.

GIS for Transportation and Air Quality, Roger L. Wayson, ed., 1992), with Shashi K. Sathisan, David E. James and Soon-tin Lim, p182-194.

Hotel-Casino Trip Generation Analysis Using GIS, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Shashi K. Sathisan and Emelinda M. Parentela, p52-56

Sowers, George F.

The Human Factor in Failures, CE Mar. 91, p72-73
err: CE May 91, p36
disc: Robert H. Seay, CE May 91, p30
disc: Claude Fetzer, CE Apr. 92, p32
Natural Landsides, (Stability and Performance of Slopes
and Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p804-833

Spanns, Egbert J. A. see Nieber, John L., (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p168-181

Spadoni, Richard H.
Monitoring of the 1988 Boca Raton Beach Nourishment Project, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), pl 20-136

Spana, Paul C. see Bell, Larry S., AS Apr. 92, p230-247

Spang, Wesley
disc. (of Hydrocompression Settlement of Deep Fills, by
Thomas L. Brandon, J. Michael Duncan and William
S. Gardner, GT Oct. 90, p1536-1548) with Scott L.
Hardman, GT June 92, p952-954

Spangler, Elson B.

Roughness Measurements of Airfield Pavements, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janco, ed. and Robert A. Eaton, ed., 1992), with Anthony G. Gerardi and Hisao Tomita, p352-366

mos, P. D.

Spanos, P. D. Spanos, P. D. Stochastic Mixed Finite Difference Method, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with B. A. Zeldin, p804-807 see Ghanem, R., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p404-407

see Zeldin, B. A., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p37-40

Spanos, Pol D. Linear System Spectral Moments Determination, (Probabilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), with Scott M. Miller, liability, p192-195

see Roy, R. Valéry, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p412-415
see Shekarian, Majid, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p328-331

p328-331

Spaulding, M. L.

A Model System for Simulating Larval Entrainment on Existing and Remedial Designs of Seawater Intakes, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with K. Jayko, T. Isaji, E. L. Anderson, E. Howlett, J. C. Swanson, D. Mendelsohn and S. Puckett, p170-175

A Shell Approach to Modeling Oil Spill Trajectory and Fate and Search and Rescue Operations, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with E. Howlett, K. Jayko, E. Anderson and T. Isaji, p157-174

Spaulding, Malcolm L.
Estuarine and Coastal Modeling, with Keith Bedford, ed.,
Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992, 0-87262-861-2, 798pp.

Spear, Robin see Umphres, Margaret B., (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p238-243

Speck, Robert S., Jr.

see O'Rourke, Michael J., ST Sept. 92, p2338-2350

Speece, R. E.

see Tang, N. H., EE Jan./Feb. 92, p17-37

Speece, Richard E.

see Nirmalakhandan, N., EE Mar./Apr. 92, p226-237

see Randall, R. E., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p607-621

Spell, C. Anthony see Zhang, Jun, WW July/Aug. 92, p401-416

Spelt, Jan K.

see Ackerman, Josef Daniel, EE Sept./Oct. 92, p708-724

Spence, Lynn see Palmer, Richard N., (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p144-160

Spencer, B. F. Jr.
Reliability of Controlled Structures Subject to Real Parameter Uncertainties, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with C. Montemagno, M. K. Sain and P. M. Sain, p369-372

see Bergman, L. A., (Probabilistic Mechanics and Structur-al and Geotechnical Reliability, Y. K. Lin, ed., 1992), p519-522

see Enneking, T. J., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p792-795

see Sain, P. M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815 see Suhardjo, J., EM Dec. 92, p2463-2481

valuations of Glass Vitrification Techniques on Iron Ratio Determinations, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2399-2405

Spengler, R. W.
see Wittwer, C. S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p263-271

disc. (of Water's New World, by Laura Lang, CE June 92, p48-50), CE Sept. 92, p35

Spilker, H.

The Development and Testprogram of Transport and Storage Casks for Vitrified High Level Wastes, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. Hüggenberg, pl 221-1230

see Janberg, K., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p385-394

Spillers, W. R.
Optimal Design for Plate Buckling, with Robert Levy, ST
Mar. 90, p850-858
dise: Cedric Marsh, ST Jan. 92, p336-337
clo: ST Jan. 92, p337

inney, M. H.

see Wan, A. W. L., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1122-1128

orague, C. Joel
Consistency and Fairness in Geotextile Specifications,
(Materials: Performance and Prevention of Deficiencies
and Failures, Thomas D. White, ed., 1992), with Marshall Gaddy, p288-298

The Evolution of Geotextile Reinforced Embankments, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Michael Koutsourais, pl 129-1141

precher, William M.

Sprecher, William M.
An Integrated Approach to Strategic Planning in the Civilian High-Level Radioactive Waste Management Program, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Jonathan Katz and Richard J. Redmond, p1559-1564

Spring, Gary S.
Using Geographic Information Systems for Traffic Control Inventory Management, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1-8

Springer, E. P.
see Felice, C. W., (Engineering Mechanics, Loren D.
Luiss, ed. and John M. Niedzwecki, ed., 1992),

Sproat, William G., Jr. see Davis, Mackenzie L., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p49-54

roule, William J.

Opportunities for Fixed Rail Service to Airports, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), with Srinivasa Mandalapu, p223-231

Sputo, Thomas disc. (of Ph.D. Roadblocks for Experienced Engineers, by Bruce E. Marsh, El Jan. 90, p56-60), El Apr. 92, p201-

Squitier, Judd E. see Russell, Thomas S., Jr., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p934-941

Sraders, Gregory A. see Elsbury, Bill R., GT Nov. 90, p1641-1660

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Sridharan, A.
Stiffness Coefficients of Layered Soil Systems, with N. S.
V. V. S. J. Gandhi and S. Suresh, GT Apr. 90, p604-624 disc: K. S. Li, GT Mar. 92, p502-503 disc: D. R. Phatak and A. S. Potnis, GT Mar. 92, p504-604

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Cic: G1 Mar. 92, p303-307

Technique for Using Fine-Grained Soil in Reinforced Earth, with B. R. Srinivasa Murthy, Bindumadhava and K. Revanasiddappa, GT Aug. 91, p1174-1190

disc: Robert W. Day, GT Dec. 92, p2008

disc: D. R. Phatak and Shashank Sinha, GT Dec. 92, p2009

see Misra, Rajeev, IR Sept./Oct. 92, p690-707

Postbuckling Behavior of Stiffened Composite Shell Panels, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with A. Kasagi and M. Zeggane, p648-651

Srinivasan, C. N. disc. (of Bond Strength in Battened Composite Columns, by Yasser M. Hunaiti, ST Mar. 91, p699-714), ST Apr. 92, p1153-1156

disc. (of Codification of Design Load Criteria Subject to Modeling Uncertainty, by Marc A. Maes, ST Oct. 91, p2988-3007) with C. R. Arvind, ST Oct. 92, p2946-2947

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Srinivasan, Mukund

Stochastic Critical Excitations, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Ross Corotis and Bruce Ellingwood, ed., 1992 p388-391

Srinivasan, P.
see Ward, David S., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

Sriram, Duvvuru see Ahmed, Shamim, CP Jan. 92, p85-105

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Sritharan, Subramania Iyer

Equivalent Kostiakov Parameters for SCS Infiltration Families, IR Jan./Feb. 92, p192-197

Srivastava, R.

disc. (of Bed-Load and Suspended-Load Transport of Nonuniform Sediments, by Prabhata K. Swamee and Chandra Shekhar P. Ojha, HY June 91, p774-787) with D. N. Contractor, HY June 92, p948-949

Srivastava, R. M.

see Cromer, M. V., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p420-425

Scivastava, Ravindra M.

Type II Sedimentation: Removal Efficiency from Col-umn-Settling Tests, EE May/June 92, p438-441 disc. (of Developing a Civil Engineer for the 21st Centu-ry, by Ronald W. Eck, El Apr. 90, p156-163), El Apr. 92, p211-212

disc. (of Dialogue on Political Contributions and Engineering, by William E. Norris, El Jan. 90, p38-41), El Jan. 92, p90-91

Srivatava, Ravindra M.

disc. (of Competition Leads to Losing, by Frank Pierce Johnson, ME July 90, p258-261), ME Jan. 92, p97-98

St. John, John P.

Modeling of CSO Impacts in Jamaica Bay and Tributar-ies, (Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with William M. Leo and Robert Gaffoglio, p90-95

see Balog, George G., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p346-351

see Balog, George G., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p498-503

Stahl, David

see Doering, Thomas W., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p362-365

disc. (of Probing the Golden Gate, by Mark A. Ketchum and Al Heldermon, CE June 91, p42-45), CE Mar. 92, p36,38

Staker, Kenneth J.

see Abt, Steven R., HY May 92, p798-803 see Abt, Steven R., IR Nov./Dec. 90, p797-803

Stakhiv, Eugene

see Li, Duan, (Risk-Based Decision Making in Water Re-sources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p260-283

see Haimes, Yacov Y., ed., Risk-Based Decision Making in Water Resources V

Stalnaker, Judith J.

Analysis of Delamination of Post-Tensioned Silos, with Mark D. Fugler, ST Apr. 92, p1014-1022

Stam, Cor-Jan M.

see van der Meer, Jentsje W., WW Sept./Oct. 92, p534-

Stamatopoulos, Aris C. see Kotzias, Panaghiotis C., GT Aug. 92, p1247-1255

see O'Connor, J. T., CO June 91, p242-258

Stamos, Christina L.

Use of D-C Resistivit to Map Saline Ground Water, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Steven K. Predmore and Adel A. R. Zohdy, p80-85

Stamon, A. I.

see Lyn, D. A., HY June 92, p849-867

Stanchell, Frank

see Chan, Tin, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p297-303

Standards Committee for Design of Steel Transmission Towers, American Society of Civil Engineers, (Edwin H. Gaylord, chmn.)

Design of Latticed Steel Transmission Structures (ANSI/ ASCE 10-90) (St No. 90-010), 1992, 0-87262-858-2, 64pp.

Standley, Robert S.

see Gilley, Curtiss W., TE Jan./Feb. 92, p1-19

Stank, Kevin R.

Service Records of Chicago District Breakwater Stone and How These Relate to Test Results, (Durability of Stone for Rubbie Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), with James W. Knox, p95-114

Microorganism Survival in Ice-Covered Marine Environ-ment, with D. W. Smith and G. D. Milne, CR June 92,

Stanphill, Dean R.

disc. (of Organizational Design: Some Helpful Notions, by Melville Hensey, ME July 90, p262-269), ME Jan. 92, p98-99

Stansbury, J.

Methodology for Evaluating Dredged Material Alternatives Using Risk-Cost Analysis Under Uncertainty, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), with I. Bogardi and W. E. Kelly, 23464. p236-259

Staples, A.

See Legg, S. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p980-984

Stapp, John see Findler, Nicholas V., TE Jan./Feb. 92, p99-110

see Findler, Nicholas V., TE Jan./Feb. 92, p99-110

Stark, Timothy D.

Comparison of Field and Laboratory Residual Strengths, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Hisham T. Eid, p876-819 as, with J. Michael Duncan, GT Jan, 91, p139-154

disc: Robert W. Day, GT June 92, p974

disc: Robert W. Day, GT June 92, p974-976

clo: GT June 92, p976-977

Undrained Shear Strength of Liquefied Sands for Stability Analysis, with Gholamreza Mesri, GT Nov. 92, p1727-1747

see Duncan, J. Michael. (Stability and Beforessee)

see Duncan, J. Michael, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p890-904

St-Arnaud, G. see Lavallée, J. G., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1006-1021

Starnes, James H., Jr. see Noor, Ahmed K., AS July 92, p347-368

Stathopoulos, Theodore Computation of Wind Pressures on L-Shaped Buildings, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Yongsheng Zhou, p349-352

p349-332 Wind Pressures on Buildings with Mullions, with Xiwu Zhu, ST Aug. 90, p2272-2291 disc: Charles D. Clift, ST June 92, p1709-1710 disc: D. Surry, ST June 92, p1710-1711 clo: ST June 92, p1711-1713 see Saathoff, Patrick J., ST Feb. 92, p429-446

Statler, Jan

The Flow to Licensing: Technical Data Tracking and the Licensing Support System (LSS), (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2088-2092

Statler, VirLynda Method to Inhibit Technetium Migration in a Geologic Repository, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), with William H. Ellis, p1985-1990

Stauffer, Peter A.
One-Dimensional Settlement Analysis for Embankments, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Richard R. Davidson, Richard S. Ladd and David B. Paul, p387-403

Stauffer, Thomas B. see Hatfield, Kirk, EE May/June 92, p322-337

Stearns, Martin W.
see Tyrrell, Patrick T., (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p383-388

Stedinger, Jery R.
Generalized Least Squares Analyses for Hydrologic Regionalization, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Gary D. Tasker, p7-12

see Chowdhury, Jahir Uddin, HY July 91, p811-831

Steele, Edgar F.
see Sherard, James L., (Embankment Dams—James L.
Sherard Contributions, Sukhanander Singh, ed., 1992), p267-284

Steele, T. D.
see Paschis, J. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p475-480

Steele, Timothy D.
see Kunkel, James R., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p352-557

tefan, Heinz G.

Seema, Heinz G.

Efficiency of Jet Mixing of Temperature-Stratified Water, with Ruochuan Gu, EE May/June 92, p363-379

Sampling of Wastewater Effluent, with Thomas R. Johnson and Hugh L. McConnell, EE Mar./Apr. 92, p209-225

see Alavian, Vahid, HY Nov. 92, p1464-1489

Steffler, P. M. see Hicks, F. E., HY Feb. 92, p337-352

Stehlik, Stephen N.
Quarry Techniques for Dimensional Breakwater Stone,
(Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992),
with R. D. Knisely and C. L. Kramer, p170-184

Stehmeyer, Edward H., Jr.

Design and Construction of Waterfront Facilities at U.S.

Navy Homeport at Ingleside, Texas, (Ports '92, David Torseth, ed., 1992), with David W. Mock and Donald L. Goddeau, p644-656

Stein, Stuart M.

seen Young, G. Kenneth, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1106-1111

Steinberg, Eric P.
see Bulleit, William M., (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin,
ed., 1992), p9-12

Steinberg, Laura J. disc. (of Can Civil Engineers Make the Difference by In-volvement in the Political Process?, by Karen S. Irion, El Oct. 89, p441-445), El Jan. 92, p85-87

Steiner, Roy A.

Irrigation Land Management Model, with Andrew A. Keller, IR Nov./Dec. 92, p928-942.

Steiner, Walter

An Embankment on Soft Clay With an Adjacent Cut, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1922), with Richard Metzger and W. Allen Marr,

II. Raymond B. Secu, etc. and S. Allen Marr, 1992), with Richard Metzger and W. Allen Marr, p705-720
Soilcrete Cut-Off Wall for Undercrossing a Busy Rail Line, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Ernst Schneider and Manfred Cartus, p384-397

Steinmann, Paul see Willam, Kaspar, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p772-775

Stelling, Gous S.

Approximation of Convective Processes by Cyclic AOI Methods, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bediord, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Jan J. Leendertse, p771-782.

Stenstrom, Michael K.

Stenstrom, Michael K.
see Babcock, Roger W., Jr., (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p468-473
see Hsieh, Chu-Chin, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p73-78

see Tzeng, Chwen-Jeng, (Environmental Engineering: Saving a Threatened Resource—In Search of Solu-tions, F. Pierce Linaweaver, ed., 1992), p67-72 see Yuan, Weibo, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p480-485

Stepp, J. C. see Shaw, R., (High Level Radioactive Waste Management Program Committee, 1992), p869-873

Stepp, J. Carl see McGuire, Robin K., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1 137-1141

Sterling, Rayn

Underground Research: Here and There, CE Dec. 92, p56-58

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Stessel, Richard Ian

Controlling Pulsed Incompressible Flow, EY Apr. 92, p1-

Particle Motion in Rotary Screen, with S. C. Kranc, EM Mar. 92, p604-619

Stets, Julie P.

see LeCompte, Malcolm A., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p726-738

Stetzenbach, Klaus J.
see Dombrowski, Tonya, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1991-1996

Stevens, A. L. see Costin, L. S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p643-649

Constitutive Modeling of Slurry Infiltrated Fiber Concrete (SIFCON), (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p992-

Strain-Based Constitutive Model with Mixed Evolution Rules for Concrete, with Dajin Liu, EM June 92, p1184-1200

Stevens, David K. see Hickey, Thomas A., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p510-515

see Kana, Timothy W., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p29-44

Stevens, Len K.

see Goldsworthy, Helen M., ST Jan. 92, p1-17 see Goldsworthy, Helen M., ST Jan. 92, p18-33

Stevens, Martha M. see Railsback, Steven F., EE Mar./Apr. 90, p361-375

Stevens, Michael A.

First Step Away from Lacey's Regime Equations, with
Carl F. Nordin, Jr., HY Nov. 90, pl 422-1425
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Apr. 92, p659-661
disc: Emmett M. Laursen, HY Apr. 92, p661-662
clo: HY Apr. 92, p662

Stevens, Nancy F. see Little, Keith W., (disc), EE Mar./Apr. 90, p250-268

Stevens-Guille, P. D.

Stevens-Guitte, P. D. Ontanio Hydro's Plan for Used Nuclear Fuel, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with H. A. Howes and J. Freire-Canosa, p250-255 see Allan, C. J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p11-17

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Stevenson, John D.

Stevenson, John D.

Grandwarer, ed., 1992), p238-243
disc. (of Proposal for Structural Design Peer Review, by
Rubin M. Zallen, CF Nov. 90, p208-215), CF Aug. 92,
p197-198

Stevenson, S. N. see Williams, A. N., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p203-217

Stewart, Andrew H.

see Treat, James M., (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p91-95

Stewart, Paul P.

see Sato, Chikashi, (Grouting, Soil Improvement an Geosynthetics, Roy H. Borden, ed., Robert C Holtz, ed. and Ilan Juran, ed., 1992), p1298-1310

St-Huarre, A. Tidal Influence on the Stratification of the Miramichi Estuary, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with C. Bettignies, D. Booth and E. M. P. Chadwick, p953-958

Stille, Håkan

Stille, Håkan
see Håkansson, Ulf, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and lian Juran, ed., 1992,) p551-563
see Håssler, Lars, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and lian Juran, ed., 1992), p494-60
see Håssler, Lars, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and lian Juran, ed., 1992), p461-473

Stockey, Jane

see Fenster, David F., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p751-754

Stockey, Jane R.

see Justus, Philip S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p746-747

Stokley, John R.

see Sturz, Frederick C., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p220-227

see Bowen, B. R., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p952-955

Stokoe, Kenneth H., II.

see Gazetas, George, GT Sept. 91, p1382-1401

Stolarski, H.

see Shah, K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p498-501

Stone, Christopher M. see Harrald, John R., (Ports '92, David Torseth, ed., 1992), p657-669

see Yakowitz, D. S., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p188-193

Stone, John R.

Nose, John M.
Neo-Traditional Neighborhoods: A Solution to Traffic Congestion?, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Charles A. Johnson, p72-76

street, Scott E.

see Gist, Wendy S., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1000-1005

see Mulvihill, Michael E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p612-617

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see Einziger, R. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1449-1457

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see Kurnosov, V. A., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2387-2394

Strelkoff, Theodor EQSWP: Extended Unsteady-Flow Double-Sweep Equa-tion Solver, HY May 92, p735-742

Gradual Development of Bores in Canal Systems, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p456-461

Strickland, A. G.

Modeling Flow and Flood-Plain Storage in a Tidally Affected River, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Jerad D. Bales, pl 130-1135

Stricklin, Guy M. (Pat)

Construction Approach to Denver International Airport, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p184-191

Stroack, J. A.

Pollutant Transport Modelling in Large River Plumes, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with C. R. Murthy and T. S. Murty, p759-770

Strong, Kenneth J.
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Stronge, W. J. disc. (of Nonlinear Impact and Chaotic Response of Slen-der Rocking Objects, by Solomon C. S. Yim and Huan Lin, EM Sept. 91, p2079-2100), EM Nov. 92, p2332-

Strzepek, Kenneth M. see Valdés, Juan B., WR July/Aug. 92, p423-444

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Experience with NRC Licensing of a Dual Purpose Cask, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Todd Lesser and Marvin Smith, p1231-1235

Stubbs, Jerry see Sundberg, Chris, (Ports '92, David Torseth, ed., 1992), p723-736

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see Blair, John A., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1196-1199

see Peterman, Z. E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1582-1586

Stackless, John S.
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Management, High Level Radioactive Waste Management Program Committee, 1992), p1572-1581

Studstill, Anne

Removal of Trihalomethane Precursors by Ferric Chlo-ride Coagulation, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Appiah Amirtharajah, p526-531

Stukhart, George
Bar Codes and Data Integration in Construction, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p484-491

Stamm, Werner Water, Endangered Ecosystem: Assessment of Chemical Pollution, EE July/Aug. 92, p466-476

Stump, Stephen E.
Physical Modeling of a High Velocity Covered Urban Drainage Channel, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed. 1992), with Charles H. Tate, Jr. and Robert U. Castle, p618-623

Stumpt, Amerte L.

The Design/Build Advisor System: Integration of Databases with a Knowledge-Based System, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Thomas R. Napier, p950-958

see Songer, Anthony D., CP Oct. 32, p456-471

Sturdivant, Vernon R.

see Owen, Thomas E., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p304-307

Mechanics of Granular Materials at Very Low Effective Stress Levels, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedwecki, ed., 1992), with Nicholas C. Costes and David F. McTigue, p1035-1038

see Ansari, Farhad, ed., Nondestructive Testing of Con-crete Elements and Structures

see Budiman, Jeff S., GT Sept. 92, p1348-1359

see Nathan, Mark P., (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p441-

see Perić, Dunja, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p292-295

see Perić, Dunja, EM Mar. 92, p512-524

see Perkins, Steven W., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p189-

see Sadeh, Willy Z., ed., Engineering, Construction, and Operations in Space III

Sturz, Frederick C.

Experience with Spent Fuel Storage Licensing, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), with Ralph H. Sievers and John R. Stokley, p220-227

Styles, S. W.

Broad-Crested Weir Application on 15,000-Acre Farm, (Irrigation and Drainage: Saving a Threatened Re-source-In Search of Solutions, Ted Engman, ed., 1992), 9300-304

Su, James

see Fragaszy, Richard J., GT June 92, p920-935

Sn. John T.

see Ngo, Chien D., CE Aug. 92, p45-47

Su, Nan

see Lin, T. D., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1359-1369

Su, Shih-Tun

Spillway Design: Problems and Solutions, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p599-605

The Control of Large Amplitude Liquid Sloshing with Moving Baffles, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Y. X. Wang, p208-211

The Flow in the Front Stagnation Region of a Square Plate with a Small Disturbing Wire in its Upstream, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Q. X. Lian, p470-473

see Lian, Q. X., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p474-477

Su, Y. C.

Sta, 1. 2.
Model for Transport of Floating Debris in the Ocean, (Hydraulic Engineering: Saving a Threatened secource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with E. R. Holley and G. H. Ward, p243-248
E. B. (Hydraulic Engineering: Soving a second second

see Holley, E. R., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598

Suarez, L. E.

Modal Synthesis Method for General Dynamic Systems, with M. P. Singh, EM July 92, p1488-1503

see Şen, Zekâi, (disc), HY May 90, p612-632

Succarieh, Mohamed F.

see Elgamal, Ahmed-Waeil M., GT Oct. 90, p1443-1462

see Pearce, Bryan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p959-964

Suehiro, James M.
The Design of the Airside Concourses, (International Air Transportation: A New International Airport, Robert E. Boyet, ed., 1992), with Edward K. McCagg and J. M. Seracuse, p207-216

Sies, R. H. Reliability-Based Specification of Design Load-Effect for Penetrating Fragments and Debris, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with L. A. Twisdale, p511-31.

Suggs, Jane B. see Reese, Andrew J., (disc), WR July/Aug. 91, p482-497

Suhardjo, J.

Sunarque, J.
Frequency Domain Optimal Control of Wind-Excited Buildings, with B. F. Spencer, Jr. and A. Kareem, EM Dec. 92, p2463-2481
see Sain, P. M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p812-815

Suhrbier, John H.

Opportunities for Improved Transportation Planning, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p30-45

Suidan, M. T. see Nakhia, G. F., EE July/Aug. 92, p495-512

Sullivan, Anne see Galbraith, William L., (Computing in Civil Engineer-ing and Geographic Information Systems Symposi-um, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p161-167

Sellivan, Edward C.

Estimating Accident Benefits of Reduced Freeway Congestion, TE Mar./Apr. 90, p167-180

disc: Gökmen Ergün, TE May/June 92, p474

clo: TE May/June 92, p474-475

Summary of Roundtable Discussion on Transportation
Control Strategies, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p279-282

Sullivan, Jacquelyn F. see Reitsma, René F., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p469-474

Sullivan, Richard D.

Highway Design in 3-D, CE June 92, p68-70

Sullivan, T. M.

see Pescatore, C., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1599-1606

Sattivan, Thomas A.
A Modified Sulfate Process to Lunar Oxygen, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), 9641-650

Sully, J. P.

Sing, 3.F. Effect of Lateral Stress on CPT Penetration Pore Pressures, with R. G. Campanella, GT July 91, p1082-1088 disc: Paul W. Mayne and Fred H. Kulhawy, GT Oct. 92, p1657-1660 clo: GT Oct. 92, p1660-1661

ımanuskajonkul, Somchai

Samasbasagouau, Solacaua Responses of Bilinear and Impacting Systems Subjected to Regular Waves, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Sau-Lon James Hu, p196-199

mer, B. Mutlu

Scour Around a Vertical Pile in Waves, with Jørgen Fredsøe and Niels Christiansen, WW Jan./Feb. 92,

Samering, 1.3. Application of a Probabilistic System-Model Based Methodology for the Performance Assessment of Deep Underground Disposal of Nuclear Wastes, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with B. G. J. Thompson, p1647-1657

Summer, Wolfgang
Sediment Rating Curves Based on Ranked Values, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Bennings, ed. and Nani G. Bhowmik, ed., 1992), with Jean-Pierre Villeneuve,

Summerell, B. Ray
CAD and the Corps, with Kevin Carrigan and Jamie B.
Wrenn, CE June 92, p52-54

Summers, Joseph B.
Technology Transfer for Projects in South America, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p209-

Sun, Bao-Jun
Design Aids for Reinforced Concrete Columns, with ZhiTao Lu, ST Nov. 92, p2986-2995

m, Chun-Wei Hsu, Tai-Wen, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p466-469

Sun, L. Charles
A Numerical Model Simulation of Tidal Currents in Long Island and Block Island Sounds, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p513-524

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Sundberg, Chris
West Point Temporary Construction Dock, (Ports '92,
David Torseth, ed., 1992), with Jerry Stubbs, p723-736

Sunder, S. Shyam Numerical Integration of Transient Creep Constitutive Equations for Polycrystalline Ice, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Alex A. Elvin and S. Nanthikesan, nd29,432.

Sundqvist, Göran

Democracy and Expertise: The Story of Ringhals 3 in
Sweden, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), p166-172

Sung, Ha Keun
see Ro, Young Jae, (Estuarine and Coastal Modeling,
see Ro, Young Jae, (Estuarine and Coastal Modeling,
Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p501-512

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see Heimbach, James A., Jr., (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p553-558

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Surko, Alexander, Jr. see Erickson, Bradley P., (Ports '92, David Torseth, ed., 1992), p802-814

disc. (of Wind Pressures on Buildings with Mullions, by Theodore Stathopoulos and Xiwu Zhu, ST Aug. 90, p2272-2291), ST June 92, p1710-1711

Suryanarayana, Seshadri
Water Quality and Quantity Management in Connected
Surface Water Groundwater Systems, (Hydraulic Engineering: Saving a Threatened Resource—In Search of
Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), with A. Osman Akan, p778-783

Sussna, Stephen Rehabilitation of Infrastructure in Infill Sites, EI Oct. 92, p381-387

utaria, T. C.

Sutaria, T. C.
Circulation Issues and Impacts—Corridor Redevelopment Santa Ana, CA—A Case Study, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Abi Mogharabi, p223-227
see Boyd, Thomas J., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p67-71

see Paaswell, Robert E., ed., Site Impact Traffic Assess-ment: Problems and Solutions

erland, D. G.

Setherrand, D. G., See Wolfe, B. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1701-1710

Sutherland, Herbert J. see Veers, Paul S., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p424-427

Sutherland, Nell see Alavian, Vahid, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p501-506

Sutoh, Atsushi see Hoshiya, Masaru, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p128-131

Sutter, Thomas R. Structural Characterization of an Articulated-Truss Joint, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with K. Chauncey Wu, Kevin T. Riutort, Joseph B. Laufer and James E. Phelps, p.296-

see Wu, K. Chauncey, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p320-

Suttora, A. Nick see Draffin, Cyrii W., Jr., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1367-1571

Suzuki, Kazunori see Amaya, Takayuki, (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1670-1675

iki, Seishi

Suznki, Seishl see Bialla, Paul, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.13-24 see Knudsen, Christian W., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p.997-605

Suzuki, Yutaka see Kim, Gwan, UP Sept. 92, p81-96

dsen, Harald

Svendsen, Harsid
Frontal Dynamics and Circulation of the Upper Layer of a Fjordsystem with Complicated Topography, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Susanne R. Mikki and Lars G. Golmen, p252-267

Srendsen, I. A. see Grilli, S. T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p79-82

Svendsen, Mark see Rodgers, Charles, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p347

Svensson, Holger S. see Kovacs, Imre, ST Jan. 92, p147-168

Sviatoslavsky, I. N. see Schmitt, H. H., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1162-

Sviatoslavaky, Igor N.
Lunar He-3 Mining: Improvements on the Design of the
UW Mark II Lunar Miner, (Engineering, Construction,
and Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p1080-1091

Svinkin, Mark disc. (of Free Vibration of Embedded Foundations: Theo-ry Versus Experiment, by George Gazetas and Kenneth H. Stokoe, II., GT Sept. 91, p1382-1401), GT Nov. 92, p1862-1863

Svoronos, S. A. see Hamilton, J., EE Jan./Feb. 92, p38-55

see Jain, R., EE Jan./Feb. 92, p56-67

Swain, Eric D.

Monay The Hydraulic Structures in an Open-Chann Model, (Hydraulic Engineering: Saving a Threaten Resource—In Search of Solutions, Marshall Jenning ed. and Nani G. Bhowmik, ed., 1992), p1118-1123

ed. and Nami C. Bushasha.

Swamee, Prabhasha K.

Bed-Load and Suspended-Load Transport of Nonuniform
Sediments, with Chandra Shekhar P. Ojha, HY June
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Drag Coefficient and Fall Velocity of Nonspherical Parti-cles, with Chandra Shekhar P. Ojha, HY May 91, p660-667

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Sluice-Gate Discharge Equations, IR Jan./Feb. 92, p56-60

Swanson, Craig

see Spaulding, Malcolm L., ed., Estuarine and Coastal Modeling

Swanson, J. C.

see Spaulding, M. L., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p170-175.

Swanson, J. Craig
A PC-Based Integrated Water Quality Impact and Analysis System, (Extuarine and Coastal Modeling, Malcolm
L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg,
ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992),
with Eom Howlett and Daniel L. Mendelsohn, 489-

see Mendelsohn, Daniel L., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng, ed. and Craig Swanson, ed., 1992), p382-404

Swanson, Paul N.

The Proposed NASA Lunar-Based Astronomical Observatories, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1798-1808

Swarbrick, Gareth E.

Modeling Desiccating Behavior of Mine Tailings, with Robin Fell, GT Apr. 92, p540-557

Swarna, Venkateswarlu

Swarna, Venkateswarla
Graphs for Hydraulic Design of Sanitary Sewers, with
Prasad M. Modak, EE May/June 90, p561-574
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disc: A. M. Saatci, EE July/Aug, 92, p633-635
disc: Semra Siber Uluatarn, EE July/Aug, 92,
p635-636
clo: EE July/Aug, 92, p636-637

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see Armacost, Robert L., (Housing America in the Twee
ty-First Century, Mehmet Inan, ed., 1992), p48-57

Swartz, Stuart E.

On the Role of Experimental Mechanics in Assessing the Performance of Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p119-122

Sweeney, Bryan P.

Excavations and Contamination, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), with Joel S. Mooney,

Ground Water Management in Arkansas, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with A. Mark Bennett, III, pt 10-115

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see Noorany, Iraj, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1244-1257

Sweidan, Basheer N. see Harichandran, Ronald S., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p264-267

Swekosky, Frank J.
see DeStephen, Raymond A., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p829-841

Swift, Daniel P. Finite Element Analysis of Cold Embedments in Fresh Concrete, with Jay A. Puckett and Thomas V. Edgar, CR June 92, p41-57

Swift, M. Redinson
Diversion Oil Booms in Current, with Barbaros Celikkol,
Gilles LeCompagnon and Chris E. Goodwin, WW
Nov./Dec. 92, p587-598

Swiat, D. O.
Space Education Day, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with M. E. McGuinness, W. R. Sharp, S. K. Swint, J. T. Curry, B. D. Bryant, L. A. Willar and S. Solari, p2147-2160

see Swint, D. O., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160

Sy, Alex An Alternative Analysis of Vibration Tests on Two Pile Group Foundations, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), pl 36-152 Forced Vibration Testing of an Expanded Base Concrete Pile, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with David Siu, pl 70-186

Syal, M. G.

CADD Utilization in Residential Construction: From Subdivision Design to Dwelling Unit, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed. 1992), with C. McIntyre and J. H. Willenbrock,

monstruction Project Planning Process Model for Small-Medium Builders, with F. Grobler, J. H. Willenbrock and M. K. Parfitt, CO Dec. 92, p651-666

Syal, Matt Achieving Computer-Integrated Construction, with M. Kevin Parfitt and Jack Willenbrock, CC Aug. 92, p10-

Syamal, Pradip K. disc. (of Large-Displacement Effects on Dynamic Re-sponse of Eccentric Buildings, by Lidia La Mendola and Maurizio Papia, EM May 91, p934-973) with O. A. Pekau, EM Sept. 92, p1976-1977.

Syed, Hameed S.
see Zwerneman, Farrel J., (Materials: Performance and
Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p339-352

Syed, N. A. see Sohal, I. S., ST July 92, p1822-1839

Sykes, Richard
Nutrient Removal for Two Industrial Recycling Projects,
(Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce, Linaweaver,
ed., 1992), p382-387

Sykora, D. W.
Post-Earthquake Slope Stability of Two Dams with Liquefied Gravel Foundations, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with J. P. Koester, R. E. Wahl and M. E. Hynes, p990-1005

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Symons, James M. disc. (of Evaluation of BAT for VOCs in Drinking Water, by Robert M. Clark and Jeffrey Q. Adams, EE Mar./ Apr. 91, p247-268), EE May/June 92, p458-459

Synolakia, C. E. see Abdel-Ghaffar, A. M., (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p37-48

Szavitz-Nossan, Vlasta disc. (of SOA: Large Strain Consolidation Predictions, by F. C. Townsend and M. C. McVay, GT Feb. 90, p222-243) with Robert L. Schiffman and Robert E. Gibson, GT Jan. 92, p168-169

Szewczyk, Zbigniew P.
Neural Networks Based Damage Letection in Structures, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Prabhat Hajela, p1163-

Szymczak, C. see Budkowska, B. B., EM June 92, p1239-1248 see Budkowska, B. B., (disc), CR Sept. 91, p89-105

Tabatabase, Nader see Sebaaly, Peter E., (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p382-396 see Sebaaly, Peter E., Te Nov/Dec. 92, p805-819

Tabah, Samt W.
Bayesian Reliability Updating of Existing Steel Girder Bridges, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p55-58
Probabilistic Analysis of Post-Tensioned Steel Girder Bridges, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Leak P. Keuser, nl.2.16 Jack R. Kayser, p13-16

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Taghavi, S. Allreza
Alternative Methods of Drainage Management in San
Joaquin Valley, California, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992),
with Ben Everett, p332-337
see Tracy, John C., (Water Resources Planning and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p50-55

Take, Mohd Raihan

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Taha, Ramzi

Engineering Properties and Potential Uses of By-Product Phosphygypsum, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Roger Seals, p.250-263

The Use of Flue Gas Desulfurization Gypsum in Civil Engineering Applications, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Donald Saylak, p.264-273

Saylax, p.20-2.73
The Use of Phosphogypsum-Based Slag Aggregate in Hot Mix Asphaltic Concrete, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), with Roger Seals, p202-216

Taheri, Mohammad R. see Kukreti, Anant R., TE May/June 92, p341-360

Tai, Yuan-Liang see Dempsey, Brian A., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p486-491

Takabatake, Hideo

Effects of Dead Loads in Dynamic Plates, ST Jan. 92, p34-51

Takada, Tsuyoshi
Variability Response Functions and Stochastic Field Discretization in Stochastic Finite Element Methods, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p116-119

Takahashi, Patrick

Facilitating Technology for Fuel Production and Energy-Enhanced Products, (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), with Charles Kinoshita, Stephen Oney and Joseph Vadus, p293-305

Takahashi, Tamotsu
Routing Debris Flows with Particle Segregation, with
Hajime Nakagawa, Tatsuo Harada and Yousuke
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Hasegawa, ST Feb. 92, p377-391

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Taiwar, Mahesh Alternative Fuels and Their Relations to TCM's for Santa Barbara County, (Transportation Planning and Air Quality, Roger L. Wayson, ed., 1992), p327-346

Tamaro, G. J.
see Gould, J. P., (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman, ed., 1992), p144-171

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ro, Mark

James, Mark. see Sause, Richard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992, p214-221

Tamayo, C. see Moreno, L., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p840-849

Tamba, Lewis A. disc. (of Plain Engineering: Philosophical and Ethical View, by Steven S. Crider, El Apr. 90, p148-155), El Jan. 92, p98

Tamm, J.
The Socio-Economic Impact Assessment for Nuclear Fuel
Waste Disposal—Meeting the Challenges of the Canadian Environmental Review Process, (High Level Radiooactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992), with
T. Wlodarzyk, p1777-1785

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Tan, Nurhan see Frangopol, Dan M., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p340-343

Tan, Siew-Ana Drainage Efficiency of Sand Layer in Layered Clay-Sand Reclamation, with Kee-Ming Liang, Kwet-Yew Yong and Seng-Lip Lee, GT Feb. 92, p209-228

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Landslide-Generated Waves in Reservoirs, (Engineering Mechanics, Loren D. Lutes, ed. and John Niedzwecki, ed., 1992), with J. F. Lee, p220-223

Tang, F. F.

see Yuan, X., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p616-619

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QSAR Parameters for Toxicity of Organic Chemicals to Nitrobacter, with D. J. W. Blum, R. E. Speece and N. Nirmalakhandan, EE Jan./Feb. 92, p17-37

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Tang, Siong K.

Parallelisation of a Distinct Element Stress Analysis Program, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Gregory K. Egan and Michael A. Coulthard, p770-777

A Cumulative Failure Criterion of Concrete Under Uniaxial Dynamic Compressive Loading, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Dan G. Zollinger, p860-

An Elastoviscoplastic Model for High Strength Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p856-859

Fracture Mechanics and Size Effect of Concrete in Ten-sion, with Surendra P. Shah and Chengsheng Ouyang, ST Nov. 92, p3169-3185

Rate Effects in Uniaxial Dynamic Compression of Concrete, with Lawrence E. Malvern and David A. Jenkins, EM Jan. 92, p108-124 err: EM Oct. 92, p2157

Tang, Wilson H.
Offshore Pile System Reliability, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Robert B. Gilbert, p228-231
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Bond Strength of Straight GFRP Rebars, (Materials: Per-formance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with M. R. Ehsani and H. Saadatmanesh, p598-605

Tao, Zongwei
Markov Decision Processes in Structural Optimization,
(Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with J. Hugh Ellis
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Task Committee for the Preparation of Guidelines for Re-habilitation of Civil Works of Hydroelectric Plants, Hy-dropower Committee, American Society of Civil Engi-neers, (Ashok K. Rajpal, chmm.)
Guidelines for Rehabilitation of Civil Works of Hydro-electric Plants, Format: unbound, three-hole punched, 1992, 0-87262-889-2, 247pp.

Task Committee on Lunar Base Structures Overview of Existing Lunar Base Structural Concepts, AS Apr. 92, p159-174

Task Committee on Radiation Energy Treatment, Air and Radiation Management Committee, Environmental En-gineering Division, (Paul Kruger, chmn.) Radiation Energy Treatment of Water, Wastewater and Sludge: A State-of-the-Art Report, 1992, 0-87262-901-

5, 52pp.

Task Committee on the Verification and Validation of Ground Water Models Ground Water Model Verification and Validation Issues,

(Hydraulic Engineering: Saving a Threatened Re-source—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p39-42

Task Committee on Water Pricing Policy, (Neil S. Grigg,

Water Pricing Policy in the United States: Task Committee Report, (Water Resources Planning and Manag-ment: Saving a Threatened Resource—In Search of St lutions, Mohammad Karamouz, ed., 1992), p636-641

Tasker, Gary D.
see Stedinger, Jery R., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,

Tate, Charles H., Jr. see Stump, Stephen E., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p618-623

Tatro, Stephen
Roller Compacted Concrete Mix Design, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with James K. Hinds, p323-

Thermal Analysis for RCC—A Practical Approach, (Roll-er Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Ernest Schrader, p389-406

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Tausch, Norbert

Recent European Developments in Constructing Grouted
Slabs, (Grouting, Soil Improvement and Geosynthetics,
Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan
Juran, ed., 1992), p301-312

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Tavakoli, Amir
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Soil Behavior from Unconventional Loading Conditions,
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M. Niedzwecki, ed., 1992), p272-275

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Taylor, Dan
Session Summary—Risk and Reliability of Water Resources Infrastructure, (Risk-Based Decision Making in Water Resources V, Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p350-354

Taylor, Daniel B.

Taylor, Daniel B.
Moving Toward a Probability-Based Risk Analysis of the
Benefits and Costs of Major Rehabilitation Projects,
Risk-Based Decision Making in Water Resources V,
Yacov Y, Haimes, ed., David A. Moser, ed. and Eugene
Z. Stakhiv, ed., 1992), with Keith D. Hofseth, Leonard
A. Shabman and David A. Moser, p148-173

Taylor, G. Jeffrey
see Cole, Robert E., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein
Sture, ed. and Russell J. Miller, ed., 1992), p1434-

Taylor, Gary E. see Gularte, Francis B., (Grouting, Soil Improvement an Geosynthetics, Roy H. Borden, ed., Robert C Holtz, ed. and Ilan Juran, ed., 1992), p423-435

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Taylor, Ira N

see Thompson, Marion L., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1368-1372

Taylor, Lawrence A.
Beneficiation of Lunar Rocks and Regolith: Concepts and
Difficulties, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed.
and Russell J. Miller, ed., 1992), with David S. McKay,
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The Feasibility of Processes for the Production of Oxygen on the Moon, (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with W. David Carri-er, III., p752-762

Taylor, Michael A

ASJOE, MICRAEI A. assive Acoustic Emission for Quantitative Evaluation of Freeze Thaw and Alkali Aggregate Reaction in Concretes, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p1-12

Taylor, Peter
The Influence of Moisture on Air Oxidation of UO<sub>2</sub>: Calculations and Observations, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Robert J. Lemire and Donald D. Wood, p1442-1448

Taylor, Scott M.
disc. (of Menu of Coupled Velocity and SedimentDischarge Relations for Rivers, by M. Fazle Karim and
John F. Kennedy, HY Aug. 90, 9978-996) with M.
Gamal Mostafa, HY May 92, p812-813

Tazir, Zahra-El-Hayat

Knowledge Acquisition for Postearthquake Usability Decisions, (Knowledge Acquisition in Civil Engineering, Tomasz Arciszewski, ed. and Lewis A. Rossman, ed., 1992), with Tommaso Pagnoni and Carlo Gavarini, p147-168

Tazoh, T.

see Gazetas, G., (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), p56-93

Tchaou, Marcel K.

chaon, Marcel R. Markov Chain Approach for Analyzing Palmer Drought Index, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Saied Mostaghimi and G. V. Loganathan, p341-346

Teeter, Allen

Teeter, Allen
An Intrusive Fluid Mud Surveying System, (Hydraulic
Engineering: Saving a Threatened Resource—In Search
of Solutions, Marshall Jennings, ed. and Nani G
Bhowmik, ed., 1992), with Glynn Banks, Michael Alexander and Andrew Salkield, p1012-1017
see Herbich, John B., (Coastal Engineering Practice '92,
Steven A. Hughes, ed., 1992), p1069-1082

Teeter, Cynthia L.
Reduced Recharge Capacity of a Pump and Treat System, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Douglas Gunnison, Norman R. Francingues, Jr. and Mark E. Zappi, p1197-1203

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Prevention of Deficiencies and Failures, Thomas D.
White, ed., 1992), p353-362

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see Khan, Nazrul I., (Civil Engineering in the Oceans V,
Robert T. Hudspeth, ed., 1992), p783-797

Tenek, Lazarus H.
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Lutes, ed. and John M. Niedzwecki, ed., 1992), Lutes, ed p539-542

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Teng, Jin-Guang Buckling of Pressurized Axisymmetrically Imperfect Cyl-inders Under Axial Loads, with J. Michael Rotter, EM Feb. 92, p229-247

Teoh, Choo B.
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Terpening, Thomas B.
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Terry, Peter A.

Traffic Impact Study Ingredients, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p217-222

disc. (of Regarding Nature as Raw or Cooked, by Margar-et N. Maxey, CE Oct. 91, p61-63), CE Feb. 92, p30

Terry, Phillp Guide for Evaluating Engineering Software: Organization Impact (Book Review), CC Feb. 92, p2-3,5 Guide for Evaluating Engineering Software: Software Use and User Qualifications (Book Review), CC Jan. 92,

Guide to Evaluating Engineering Software: Program Doc-umentation (book review), CC Mar. 92, p2-3 Legal Logistics of Software Evaluation, CC Apr. 92, p1-3

Terry, Philip C.

Using Computers to Competitive Advantage: Philosophy and Example, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1105-

Terzidis, George disc. (of Simple and Accurate Friction Loss Equation for Plastic Pipe, by R. D. von Bernuth, IR Mar./Apr. 90, p294-298), IR May/June 92, p501-504

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Measurement of Deformations in Buried Pipeline, with
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Inacet, Wand T.
Work Space Constraints Modeling for Process Scheduling Using Artificial Intelligence and 3D Computer Modeling Technologies, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Ayman A. Morad and Yvan J. Beliveau, p727-736

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Predicting Effluent PCBs From Superfund Site Dredged
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Thene, John R.

Gas-Transfer Measurements Using Headspace Analysis of Propane, with John S. Gulliver, EE Nov./Dec. 90, p1107-1124

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Thevanayagam, S. Modeling Anisotropy of Clays at Critical State, with J.-L. Chameau, EM Apr. 92, p786-806

Thibodeaux, Kirk G.

A Brief Literature Review of Open-Channel Current Meter Testing, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p458-463.

403 sesh-Generating Computer Program for the FESWMS-2DH Surface-Water Flow Model, (Hydraulic Engineer-ing: Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p323-328

Thiers, Gerald R.
Zunil 1 Landslide and Landslide Hazard, (Stability and
Performance of Slopes and Embankments II, Raymond
B. Seed, ed. and Ross W. Boulanger, ed., 1992), with
Alan Benfer, Luis Merlda and Richard Grass, p205-221

Thirumalai, K.
Technology Issues for Enhancing Waste Material Utilization in Highway Construction Addressed by the SHRP-IDEA Program, (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p1-8

Thoft-Christensen, Palle Risk Based Structural Optimization, (Probabilistic Me-chanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p535-538

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Management, High Level Radioactive Waste Management Program Committee, 1992), p738-745

Thomana, Thomas G.
disc. (of Postdemsification Penetration Resistance of Clean Sands, by G. Mesri, T. W. Feng and J. M. Benak, GT July 90, p1095-1115) with Roman D. Hryciw, GT Mar. 92, p508-511

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see Mills, W. Carliale, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p372-377

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Thomas, H. Randolph
Automated Identification of Construction Equipment
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Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), with Gary R. Smith and J. G. Orlowsky, p492-

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Thomas, James R.
The Design of a Permanent Lunar Research Station, (Engineering, Construction, and Operations in Space III, Willy Z. Sadch, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p201-212

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Thomas, Michael R. Earthflow Evaluation and Control: A Case History, (Sta-billy and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Alan L. Kropp, p830-88.

Thompson, A. B.

An Integrated Human/Plant Metabolic Mass Balance
Model, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), with J. R. Schulz and C. G.
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Thompson, B. G. J.
see Sumerling, T. J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1647-1657

Thompson, David B.
Numerical Methods 101—Convergence of Numerical Models, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p398-403

ed. and ream of Burwards.

Thompson, Edward F.

Estimation of Wind Fields for Coastal Modeling, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Rajph Cheng, ed. and Craig Swanson, ed., 1992), with Zeki Demirbilek, p564-573

see Kaihatu, James M., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p615-631

hompson, Everett S. erformance Evaluations: Key to People Development, ME Oct. 90, p373-377 disc: Michael Lee Smith, ME Jan. 92, p100-101

Thompson, Gary O. Flexible Membrane Wave Barrier, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with Charles K. Sollitt, William G. McDougal and William R. Bender, Jr., p129-148

Thompson, H. Gordon, II.

ITS-CONCRETE: A Functional Description, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with Nelson C. Baker, p222-228

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see Griffith, Don A., (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p559-564

Thompson, Ken
City of San Diego—Study of Potable Reuse of Reclaimed
Wastewater: Final Results, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Adam W.
Olivieri, Don Eisenberg, Robert C. Cooper, Richard E.
Danielson and Lori Pettigrew, p133-138

Thompson, Marios L.

Actinide Recycle and Waste Management, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Ira N. Taylor, p1368-1372

Thompson, P. M.
Design and Construction of Two Major Experiments at
the URL, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with B. H. Kjartanson and R. S.
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Thompson, S. A. see Bucklin, R. A., ST Nov. 90, p3175-3190

Thompson, Startey L. see Sandoval, Robert P., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1188-1195

Thomson, R. E. see Foreman, M. G. G., (Estuarine and Coastal Modeling, see Foreman, M. G. G., (Estuarine and Coastal Modeling, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p574-585

Thomson, Ronald see Raiston, Michael, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p786-

Thoreson, B. P. see Hart, W. E., IR Nov./Dec. 92, p971-976

disc. (of Practitioners in Classroom: Viable Tool in Civil Engineering Education, by James W. Poirot, ME Oct. 90, p388-393), ME Apr. 92, p211-212

Thorne, Colin R. see Masterman, Richard, HY July 92, p1052-1058

Thornton, Charles H.
Seismically Safe, Spectator-Friendly, with Thomas Z.
Scarangello and Chris Christoforou, CE Feb. 92, p52-

Thorston, Edward B. see Wyland, Robert M., WW Jan./Feb. 91, p60-74

Thorston, Larry
see Evans, Barry, (Irrigation and Drainage: Saving a
Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p499-504

Thornton, Thomas A.

see Bale, Michael G., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p116-121

Thorpe, Scott Ian see Ross, Dennis H., UP Sept. 92, p106-118

Thurairajah, A. see Loganathan, N., GT Apr. 92, p593-610

Thyea, Christopher
Operations Analysis for a Large Lunar Telescope, (Engineering, Construction, and Operations in Space III,
Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J.
Miller, ed., 1992), p1591-1602

Tidwell, V. C. Field Research Program for Unsaturated Flow and Transport Experimentation, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with C. A. Rautman and R. J. Glass, p704-709
X-Ray and Visible Light Transmission as Two-Dimensional, Full-Field Moisture-Sensing Techniques. A Preliminary Comparison, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. J. Glass, p1099-1110

Tie, B.

see Aubry, D., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p280-283

Tillis, R. Kevin

Performance of Test Fill Constructed on Soft Peat, (Sta-bility and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Michael R. Meyer and Edwin M. Hultgren, p775-787

Tillotson, Brian

Cargo Transport to the Lunar Surface Using a Three Rotor Sling. [Engineering. Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1010-1021

Ting, Bing Yuan see Lai, Yew Chin, ST Mar. 92, p853-858

Ting, E. C.
see Rice, D. L., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p827-838

Ting, Francis C. K.

Wave Interaction with Fluid Mud in Rectangular Trench, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p75-78

Computational Laboratory for Discrete Element Geome-chanics, with Brent T. Corkum, CP Apr. 92, p129-146 see Lin, Jeen-Shang, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p425-428

Ilnoco, Fernando H. disc. (of Bearing Capacity of Expanded-Base Piles in Sand, by William J. Neely, GT Jan. 90, p73-87), GT Jan. 92, p160-163 disc. (of Mechanisms of Strength Loss in Stiff Clays, by Timothy D. Stark and J. Michael Duncan, GT Jan. 91, p139-154), GT June 92, p974-976

Tiong, Robert L. K.
Critical Success Factors in Winning BOT Contracts, with
Khim-Teck Yeo and S. C. McCarthy, CO June 92,
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Strategies in Risk Management of On-Demand Guaran-tees, CO June 92, p229-243

Tischuk, M.
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Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), p940-955

Tittlebaum, Marty see Lea, Reid, (Utilization of Waste Materials in Civil En-gineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p128-139

Tiwari, Sanjai see Abdalla, Jamai A., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p269-276

Tobey, Frank T., III. see Flick, Loren D., CE Sept. 92, p46-49

Tobiason, John E.

Fifets of Pre-Oxidation on In-Line Filtration: Particle and Manganess Removal, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Nagaraju K. Vinod, p520-525

Tobita, Jun

see Xue, Song-tao, EM Aug. 92, p1597-1611

Tocci, M.

see Eletti, G. F., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p256-262

see Aida, Tadayoshi, EM Feb. 92, p248-258

Toderean, Gavrila

see Ristoiu, Dumitru, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2264-2270

Todeschini, Ricardo A. A.

see Kadar, Istvan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p551-557

see Morin, W. J., (disc), GT Apr. 90, p589-603

Toerper, Lawrence A.

Uniform Traffic Impact Assessment Studies—A Case History of Riverside County, California, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Passwell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p114-117

Tokimatsu, Kohji

Effects of Multiple Modes on Rayleigh Wave Dispersion Characteristics, with Shuji Tamura and Hisaya Koji-ma, GT Oct. 92, p1529-1543

Use of Short-Period Microtremors for V<sub>3</sub> Profiling, with Kenichiro Shinzawa and Shinichi Kuwayama, GT Oct. 92, p1544-1558

Tolman, Rex A.
Modified QUALZE Modeling of a Stream Acutely Impacted by Photosynthesis and Respiration, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992, p. 194-199

Toman, Michael A. see Burtraw, Dallas, EY Aug. 92, p122-135

Velocity Profiles in Steep Open-Channel Flows, with Iehi-sa Nezu, HY Jan. 92, p73-90

Tomita, Hisao

Jonata, Hisso Son B., (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p352-366 see Trani, Antonio A., (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p14-24

Tomlinson, Rodger B. see Webb, Tony, EE May/June 92, p338-362

Tommelein, I. D.
SightPlan Model for Site Layout, with R. E. Levitt and B.
Hayes-Roth, CO Dec. 92, p749-766
Site-Layout Modeling: How Can Artificial Intelligence
Help?, with R. E. Levitt and B. Hayes-Roth, CO Sept.
92, p394-611

Tommelein, Iris D.

Tommelein, Iris D. Constructing Site Layouts using Blackboard Reasoning with Layered Knowledge, (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p214-258
Space-Time Characterization for Resource Management on Construction Sites, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Juan G. Castillo and Pierrette P. Zouein, p623-630 630

oso see Odeh, Abdalla M., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1042-1049

Toms, Ed A.
see Bergquist, R. Joseph, (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p328-331

Correction Criteria of Finite Element Modeling in Struc-tural Dynamics, with Z. Liang and G. C. Lee, EM Apr. 92, p663-682

Tong, Wenxia

Parametric Study of Continuous Prestressed Composite Girders, with Hamid Saadatmanesh, ST Jan. 92, p186-

Tonias, Constantine N.
Computer Vendor-User Relationships, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Elias C. Tonias, p1007-1014

Tonins, Elias C.

see Tonias, Constantine N., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p1007-1014

Tootle, Glenn A.

see Motz, Louis H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-286

Topping, B. H. V. see Kirsch, U., ST July 92, p1770-1785

Torluemke, Donald A.
Travel Markets: An Approach to TCM Effectiveness
Evaluation, (Transportation Planning and Air Quality,
Roger L. Wayson, ed., 1992), p177-181

Torng, T. Y. see Wu, Y.-T., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p491-494

Toro, F. Mauricio see Dee, Dick P. (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p416-421

Toro, Gabriel R.
see McGuire, Robin K., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p1 137-1141

Toro, Juan C. Molano

disc. (of Beam Strength Enhancement at Design Ductility Factor Demands, by Gaetano Russo, ST Dec. 90, p3402-3416), ST June 92, p1713-1715

Torseth, David Ports '92, 2 vols., 1992, 0-87262-874-4, 1212pp.

Tosca, Sandra Z.

The Effects of Fillers and Admixtures on Grout Performance, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Jeffrey C. Evans, p337-349

Tougs, L. D. S., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeb, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p469-482 see Pieniazek, L. A., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeb, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1631-1644

Toups, Larry see Sherwood, Brent, AS Apr. 92, p175-186

Towns, Larry D. see Connolly, John F., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2188-2195

Touran, Ali
Automatic Generation of Simulation Codes in Construction, (Computing in Civil Engineering and Geographic
Information Systems Symposium, Barry J. Goodno, ed.
and Jeff R. Wright, ed., 1992), p1030-1057
Monte Carlo Technique with Correlated Random Variables, with Edward P. Wiser, CO June 92, p258-272
Performance of Orthotropic Bridge Decks, with Alex Okereke, CF May 91, p134-148
disc: Dean Hanson, CF May 92, p131-133

Tourney, Paul Put to the Test, with Neal Berke, CE Dec. 92, p62-63

Towle, Terry W. An Owner's Viewpoint: Changes Needed, CE May 92, p6

Townsead, F. C.

SOA: Large Strain Consolidation Predictions, with M. C.

McVay, GT Feb. 90, p222-243

disc: Vlasta Szavits-Nossan, Robert L. Schiffman
and Robert E. Gibson, GT Jan. 92, p168-

disc: Vincenzo Pane, Robert L. Schiffman and Robert E. Gibson, GT Jan. 92, p169-171 see McVay, M. C., GT Oct. 92, p1626-1637

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Toyofumi, Takada see Atsunori, Miyamura, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p559-562

Trabia, Mohamed B.
ASME Pressure Vessel Code Application to Nuclear
Waste Container Design, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with Mark
Kiley, p1244-1252

Tracy, John C.

Kniey, p.1244-122
Tracy, John C.
Assessing the Reliability of the Water Supply to a Closed Basin Wetlands, (Water Resources Planning and Management Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with James K. Koelliker, p445-450
Movement of Nonpoint-Source Contaminants Through Heterogeneous Soils, IR Jan./Feb. 92, p88-103
Predicting Water Demand in Agricultural Regions Using Time Series Forecasts of Reference Crop Evapotranspiration, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Miguel A. Mariño and S. Alireza Taghavi, p50-55
Scheduling of Ground Water Pumpage in Alluvial Aquifers to Minimize the Impact on Surface Water Diversions, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Munjed Al-Sharif, p79-83
Trahair, N. S.

Trahair, N. S. see Bild, S., ST Aug. 92, p1987-2003 see Pi, Yong Lin, ST June 92, p1462-1479 see Pi, Yong Lin, ST Nov. 92, p2949-2966 see Pi, Yong Lin, ST Nov. 92, p2967-2985

Tran, Duc Minh see Ramamurthy, Amruthur S., HY Mar. 90, p449-455

Tran, Henry H.
see Kessler, John H., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2047-2055

Trani, Antonio A.
Characteristics of High-Speed Runway Exits for Airport Design, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), with Antonio G. Hobeika, Byung J. Kim, Hisao Tomita and David Middleton, pl 4-24

Trapp, John S.
Regulatory Requirements to Address Issues Related to Volcanism and Magmatism: Code of Federal Regulations, Title 10, Part 60, Disposal of High-Level Radioactive Wastes in Geologic Repositories, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Philip S. Justus, p2039-2046

Trastner, Janice J.

A Systems Reliability Approach to the Safety of Steel Connections, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Richard M. Bennett, p495-498

Richard M. Bennett, p495-498

Traver, Robert G.
Accumulation Effects of Stormwater Management Detention Basins, (Hydraulic Engineering: Saving a Threatender Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Ronald A. Chadderton, p925-930

Modeling Stormwater Basin Effects, (Water Resource Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Ronald A. Chadderton, p855-860

Treadway, A. H.
see Chambers, W. F., (High Level Radioactive Waste
Management, High Level Radioactive Waste Management Program Committee, 1992), p489-493

Treat, James M.
Reliability-Centered Management of Wood Transmission
Lines, (Probabilistic Mechanics and Structural and Geotechnical Reliability, V. K. Lin, ed., 1992), with Patrick
J. Hasenoehrl and Andrew H. Stewart, p91-95

Preny, John Polycrystalline CdTe Solar Cells for Large-Scale Space Applications, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p?98-803

and Russell J. Miller, ed., 1992, p. 198-803
Treat, Roy
Status of Scour Instrumentation Development, (Hydraulic Engineering: Saving a Threatened Resource—In
Search of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), with Ian Friedland, p. 1088-1093
see Rhodes, Jennifer, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p. 1082-1087
see Young, G. Kenneth, (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p. 106-1111

Treviso, Robert
EVA Operational Guidelines and Considerations for Use
During the Space Station Freedom Design Review
Process, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), p1656-1667

Trial, Mike

Launch Facilities as Infrastructure, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2064-2071

Triano, James R.
Durability of MSW Fly-Ash Concrete, with Gregory C.
Frantz, MT Nov. 92, p369-384

Frantafiliou, Thamasis C.
Nonprestressed and Prestressed FRP Sheets as External Reinforcement of Wood Members, (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Nikolaos Plevris and Nikola Deskovic, p710-717

Prestressed FRP Sheets as External Reinforcement of Wood Members, with Nikola Deskovic, ST May 92, p1270-1284

see Plevris, Nikolaos, MT Aug. 92, p300-317

Triantafyllos, Michael S.
Nonlinear Impulsive Motions of Low-Tension Cables, with Christopher T. Howell, EM Apr. 92, p807-830

Trieste, Douglas J.
Evaluation of Supercritical/Subcritical Flows in High-Gradient Channel, HY Aug. 92, p1107-1118

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Tripathi, R. P.

Irrigation Timing for Wheat Based on Climate, Crop, and Soil Data, IR May/June 92, p370-381

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Tripp, Sandra L.

Performance of a Denitrification System—Western
Branch Wastewater Treatment Plant Phase III Upgrade, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce
Linawe

Trivedi, Dilip

see Herbich, John B., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082

Trondec, Jean-Paul see Bideau, Daniel, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p167-170

Trout, Thomas J.
Furrow Flow Velocity Effect on Hydraulic Roughness, IR
Nov./Dec. 92, p981-987

Furrow Geometric Parameters, IR Sept./Oct. 91, p613-634

err: IR Jan./Feb. 92, p200

Truxler, Robert
see Duchon, Kip, (Water Resources Planning and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p529-531

Applications of Viscoelastic Damper to Jointed Struc-tures for Seismic Mitigation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with H. H. Lee, p685-688

see Engelhardt, M. D., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992),
p1043-1046

Tsni, Keb-Chyunn

Cyclic Behavior of End-Plate Moment Connections, with Egor P. Popov, ST Nov. 90, p2917-2930 diss: Luigi Biolzi, ST Mar. 92, p874-877 clo: ST Mar. 92, p879 Effect on Elastic Story Drift in Steel Frames, with Egor P. Popov, ST Dec. 90, p3285-3301 diss: Bruce F. Maison, ST Mar. 92, p873-879.

disc: Bruce F. Maison, ST Mar. 92, p877-879 clo: ST Mar. 92, p879

Tsang, C. F.

A Numerical Study of Water Percolation through an Unsaturated Variable Aperture Fracture Under Coupled Thermomechanical Effects, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with J. Noorishad and F. V. Hale, p304-309

Tsao, T. -C.

see Pang, S. T., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p820-823

Tsay, Ting-Kuei Linear Surface Waves Over Rotating Fluids, WW Mar./ Apr. 91, p156-171

Apr. 91, p136-171
disc: James T. Kirby, WW May/June 92, p331-333
disc: F. Mattioli, WW May/June 92, p333-335
clo: WW May/June 92, p335-336
Thermal Stratification Modeling of Lakes with Sediment
Heat Flux, with Gordon J. Ruggaber, Steven W. Effler
and Charles T. Driscoll, HY Mar. 92, p407-419

Tuy, Tswa-Sysa
Potential Flow Solution for Ground Water Mounding, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992, with John Hoopes, Craig Fergusson and Salwa Rashad, p.790
see Rashad, Salwa, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p.180-185

Tre, S. H.

19e, S. H. disc. (of Performance of Precast Driven Piles in Marine Clay, by Chun F. Leung, R. Radhakrishnan and Siew-Ann Tan, GT Apr. 91, p637-657) with T. S. K. Lam, GT July 92, p1137-1139

wo-Dimensional Statistical Micromechanical Models for Microcracked Brittle Solids, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with J. W. Ju, p361-364

Tslata, George
Truscation of Infinite Hierarchy for Hysteretic Systems, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Sau-Lon James Hu, p416-419

Tsutsumi, Hajime see Qureshi, Sohail M., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p324-327

Tucci, Carlos E. M. see Clarke, Robin T., (disc), WR July/Aug. 90, p530-549

Tucker, Gregory L., (unc.), w.K. July/Aug. 90, p530-549
Reliability Analysis of Partially Restrained Steel Connections, with Richard M. Bennett, ST Apr. 90, p1090-1101

disc: Ralph M. Richard, ST Mar. 92, p865-866 clo: ST Mar. 92, p866

Tufenkjian, Mark R. see Hadjian, Asadour H., (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), pl-26

Tulapurkara, E. G. see Chacko, Baby, EY Dec. 92, p164-179

Tuncer, Erdii R. see Basma, Adnan A., GT Oct. 92, p1491-1504 C.C. mang, Laurence Z. H., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p467-

mg, Yeos-Koung
ssessing Uncertainty of Unit Hydrograph, (Hydraulic
Engineering: Saving a Threatened Resource—In Search
of Solutions, Marshall Jennings, ed. and Nani G.
Bhowmik, ed., 1992), with Bing Zhao, p543-548
robability Distribution for Benefit/Cost Ratio and Net
Benefit, WR Mar/Apr. 92, p133-150 Tung, Yees

Tunnell, L. see Hughes, W. C., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p7-12

Tupper, Gene M. disc. (of Debris Torrents and Professional Responsibili-ties, by S. O. Russell, El Jan. 90, p49-55) with David A. Bella, El Apr. 92, p192

Turna, Mustafa Velocity Gradient in Filter Backwashing, EE Sept./Oct. 92, p776-790

Turcotte, Brian R.
Linking Data Bases to Hydraulic Computations, with N.
Davies Mtundu, CP Jan. 92, p63-71

Turck, James G.
Usefulness of Low-Cost Watershed Monitoring: A Case
Study, Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), with David W.
Blaha, p712-717

Turmon, André see Fagherazzi, Laura, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p284-303

Turk, A. Roger disc. (of Macro Wind Parameters for Load Combination, by Christopher A. Belk and Richard M. Bennett, ST Sept. 91, p2742-2756), ST Sept. 92, p2642

Turkstra, Carl see Cesare, Mark A., TE Nov./Dec. 92, p820-833

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Turnbull, Katherine F. HOV Lessons, with Dennis Christiansen, CE Sept. 92, p74-75

Turner, A. Keith
New Approaches for Regional Ground-Water Modeling
in Southern Nevada, (High Level Radioactive Waste
Management, High Level Radioactive Waste Management
Program Committee, 1992), with Kenneth E.
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Turner, Daniel S.
Steering Clear of Tort Claims, with Joseph D. Blaschke, CE July 92, p54-56

Turner, John see Dahmen, Neil J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), pl 507-1515

er, John P.

Jumer, John P. Constructability for Drilled Shafts, CO Mar. 92, p77-93 err. CO Sept. 92, p633 err. CO Sept. 92, p633 see Hasfurther, Victor R., (Irrigation and Drainage: Saving a Threatend Resource—In Search of Solutions, Ted Engman, ed., 1992), p395-400

Turner, Richard C.

A Unified Simulation Approach to Structural System Reliability Analysis, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Michael J. Baker, p104-107

Turner, T. G. see Ports, M. A., (Water Resources Planning and Manage-ment: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p280-286

Turpen, Louis A. Airport Landside Management: An Unique Airport Spe-cialty, (International Air Transportation: A New Inter-national Airport, Robert E. Boyer, ed., 1992), p212-222

Turpia, Paul D.

Process Design for Bioremediation of Nitrogen-Species
Contamination of Soils and Groundwater, (Environmental Engineering: Saving a Threatened Resource—
In Search of Solutions, F. Pierce Linaweaver, ed.,
1992), with J. Michael Henson and Steven L. Martin,
p175-179

Tusa, Wayne K.
Reassessing the Risk Assessment, CE Mar. 92, p46-48
disc: Henry L. Longest, II., CE Aug. 92, p26,28
clo: CE Aug. 92, p28-29

Twisdale, L. A.
see Sues, R. H., (Probabilistic Mechanics and Structural
and Geotechnical Reliability, Y. K. Lin, ed., 1992), p511-514

Tyagi, N. K. see Bhirud, Sanjay, IR Sept./Oct. 90, p632-644

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rski, Joseph

Fernandez, Joseph A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2290-2297

Tyrrell, Patrick T.
Hydrologic Considerations in Mined Land Reclamation,
(Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed.,
1992), with Martin W. Stearns, p383-388

Tzeng, Chwen-Jeng
Dynamic Modeling of VOC Emissions in HPO Process,
(Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), with Roger W. Babcock, Jr., Chu-Chin
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Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p468-473

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Trouvadakis, J.
Commercial Uses of Land Around Urban Railway Stations in Greece, UP Dec. 92, p119-127

Uber, James
Dynamic Plug Flow Reactor Network Model for Contaminant Transport in Water Distribution Systems, (Hydraulic Engineering, Saving a Threatened Resource—
In Search of Solutions, Marshall Jennings, ed. and Nani
G. Bhowmik, ed., 1992, with Ken Hickey, Mao Fang
and Lew Rossman, p772-777

Fresh Led Managament Modeling Framework for Optimal

Extended Management Modeling Framework for Optimal Reliability-Based Design with Sampling Decisions, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p532-536

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Ude, T. C.

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Ulrich, Cheryl Phanstiel Reformulation Efforts for Panama City Harbor, Florida, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p337-352

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Civil Engineering Experience and Education, El Jan. 92, p71-76

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Umphres, Margaret B.

Keeping the Public in Public Works Facility Planning,
(Environmental Engineering: Saving a Threatened Re-source—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), with Fliss Stevenson, Sara M. Katz and
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Unterreiner, P.
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Geosynthetics, Roy H. Borden, ed., Robert O.
Holtz, ed. and Ilan Juran, ed., 1992), p739-750

Urban, Mark R.
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and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), pl74-181

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Urek, James F. see Liu, Bill Y., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p405-410

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Ushijima, S. Prediction Method for Local Scour by Warmed Cooling-Water Jets, with T. Shimizu, A. Sasaki and Y. Tak-izawa, HY Aug. 92, pl164-1183

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Vaghar, Siamac Subsurface Characterization and Design of an Ash Land-fill on Varved Clays, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Stanley M. Bemben and Markus Walbaum, 9788-803

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Valdes, Juan B.
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1992), p268-273

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Valentine, Greg A.

Physical Processes and Effects of Magmatism in the Yucca Mountain Region, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Bruce M. Crowe and Frank V. Perry, p2014-2024

MRS Using a FUELSTORMT Vault, (High Level Radio-active Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with H. Günther, pl875-1882

Valenzuela, Mark I.
Use of Multimedia in a Sophomore Design Course, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Gregory G. Deierlein and Richard N. White, p229-236

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Motion Response and Wave Attenuation of Linked Floating Breakwaters, WW Sept./Oct. 90, p558-574

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Van Abs, Daniel J.
Critical Public Issues for Well Head Protection, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p274-279

Katantouc, ed., 1992, pd-219
Van Blariem, Vicki I.
Cathodic Protection Diagnostics for Corrosion Mitigation of Infrastructure Components, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), pl37-144

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Van Dalen, K.

disc. (of Prestress Level in Stress-Laminated Timber
Bridges, by Edward F. Sarisley and Michael L. Accorsi,
ST Nov. 90, p3003-3019) with J. H. P. Quenneville, ST
Aug. 92, p2283-2284

Yan der Heijde, Paul K. M.
Computer Codes for Modeling Multi-Phase Flow and
Transport in the Subsurface, (Hydraulic Engineering
Saving a Threatened Resource—In Search of Solutions,
Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1902). a21 1992), p31

van der Krogt, Wil N. M. see Schuurmans, Wytze, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p269-274

van der Meer, Jentsje W. Wave Runup on Smooth and Rock Slopes of Coastal Structures, with Cor-Jan M. Stam, WW Sept./Oct. 92, p534-550

Van Dyer, D. B. Strength and Efficiency of Wood Box Columns, ST Mar. 92, p716-722

van Gurp, Christ
Consistency and Reproducibility of Falling Weight De-flections, (Road and Airport Favement Response Moni-toring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p291-305

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Van Lenten, Christine see Kane, Dan, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1938-1945

Van Mullem, Joseph A.
Soil Moisture and Runoff—Another Look, (Irrigation
and Drainage: Saving a Threatened Resource—In
Search of Solutions, Ted Engman, ed., 1992), p366-371

van Niekerk, Andre Routing of Heterogeneous Sediments over Movable Bed: Model Development, with Koen R. Vogel, Rudy L. Slingerland and John S. Bridge, HY Feb. 92, p246-262 see Vogel, Koen R., HY Feb. 92, p263-279

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van Rhee, C. Influence of Seepage on Stability of Sandy Slope, with A. Bezuijen, GT Aug. 92, p1236-1240

Van Riessen, Gary J. Cement-Stabilizéo Soil for Coal Retaining Berms, (Grout-ing, Soil Improvement and Geosynthetics, Roy H. Bor-den, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Kenneth D. Hansen, 9981-992

van Rija, Leo C. New Total Sediment-Load Sampler, with Moustafa T. K. Gaweesh, HY Dec. 92, p1686-1691

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disc. (of List of Sea-State Parameters, by IAHR Working
Group on Wave Generation and Analysis, WW Nov./
Dec. 89, p793-808) with Jurjen A. Battjes, WW Mar./ Apr. 92, p226-228

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Vanegas, Jorge A.
Real-Time Integrated Computer-Aided Instruction, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1922), p81-88
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Vaniman, D. see Heiken, G., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p555-564

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Vargas, Juan C. Landfills: Anatomy of Automated Design, with David B. Porter, CE Mar. 92, p52-55

Vargo, Rick On-Orbit Assembly and Refurbishment of Lunar Transfer Vehicles, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p885-896

Vasiliadis, Haralambos V.

A Demand Driven Decision Support System for Operation of Reservoirs, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), with Mohammad Karamoux, p61-566

Reliability of Operating Rules with or without Uncertain Forecasts, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Mohammad Karamouz, ed., 1992), with

Vasquez, Jorge disc. (of Large-Displacement Effects on Dynamic Re-sponse of Eccentric Buildings, by Lidia La Mendola and Maurizio Papia, EM May 91, p954-973), EM Sept. 92, p1977-1979

Vasta, M. see Falsone, G., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p140-143

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Vaughan, Courtenay T. see Robinson, Allen C., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p519-526

Vearil, James W.
Global Warming and Possible Effects on the Central and
Southern Florida Project, (Water Resources Planning
and Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed., 1992), p13-18

Vezzey, Richard F. Fine Tuning the Airfield: The New Denver International Airport, (International Air Transportation: A New Inter-national Airport, Robert E. Boyer, ed., 1992), p7-13

Weccai, Serven. Paul International (MSP) Part 150 Implementation Design Overview, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), 932-40

Vecchio, F. J.

Finite Element Modeling of Concrete Expansion and Confinement, ST Sept. 92, p2390-2406

Veers, Paul S.

Fatigue Life Variability and Reliability Analysis of a Wind Turbine Blade, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Herbert J. Sutherland and Thomas D. Ashwill, p424-427

Vega, Luis A.

Economics of Ocean Thermal Energy Conversion (OTEC), (Ocean Energy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), p152-181

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Veletsos, Anestis S.

Dynamic Response of Flexibly Supported Liquid-Storage Tanks, with Yu Tang and H. T. Tang, ST Jan. 92, p264-283 ST Mar. 92, p881 err:

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Venigalia, Mohan M.

Venigata, Notana M. A. Software Utility for Regional Evacuation (SURE), (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Ajay K. Rathi, p25-32

Venini, Paolo see Faravelli, Lucia, (Probabilistic Mechanics and Struc-tural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p53-56

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Venkatesh, S.
Oceanographic Influences on Oil Spill Movement in the Arabian Gulf, (Hydraulic Engineering: Saving a Threatened Resource—In Search (5 Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with T. S. Murty, p108-113

Vepsä, Heimo Model Development for Operational Use to Help Spill Combating and Sea Rescue, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Erkki Alasaarela and Juha Sarkkula, p149-156

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Verma, Dhirendra Stochastic Modeling of Fatigue Crack Growth with Retar-dation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Dario A. Gasparini and Fred Moses, p433-436

Verzuh, James M.
Agricultural Drains and Safety of Dams, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Glen D. Sanders, p51-56

Veshosky, David Life-Cycle Cost Analysis Doesn't Work for Bridges, with Carl R. Beidleman, CE July 92, p6

Vesilind, P. Aarne
disc. (of Guidance for Engineering-Design-Class Lectures
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Vespa, Sesto Urban Transit Guides Application of Advanced Train Control, with Tom Parkinson, TE Jan/Feb. 92, p146-

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Vested, Hans Jacob
Circulation Modelling and Water Quality Prediction, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Ole Krull Jensen, Ann Christina Ellegaard, Hanne Karin Bach and Erik Koch Rasmussen, p317-331

Vgenopoulou, Irene
Dynamics of Saturated Rocks. IV: Column and Borehole
Problems, with Dimitri E. Beskos, EM Sept. 92,
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Vick, Steven G. disc. (of Stability Evaluation During Staged Construction, by Charles C. Ladd, GT Apr. 91, p540-615), GT Aug. 92, p1283-1288

Vickerman, M. John Planning, Design and Integration of a Computerized Ter-minal Operating System, (Ports '92, David Torseth, ed., 1992), p121-133

Victoria-Rueda, Carlos H.
NonPolar Organics Toxicity in a Municipal Effluent, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p549-554

Vieser, Ellis S.

Alliance Promotes Infrastructure Investment (ltr), CE Sept. 92, p38

lessman, Warren, Jr.
ater Management: Challenge and Opportunity, WR
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disc: Phillip Z. Kirpich, WR Jan./Feb. 92, p104106

WR Jan./Feb. 92, p107

vieux, baxter E.
Finite Element Modeling of Storm Water Runoff Using
GRASS GIS, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), with James
GIS Analysis of Parists.

Westervest, priz-118
GIS Analysis of Routes for Transportation of Hazardous
Materials, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), with
Madhusudan V. Kalyanapuram, p168-173

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Vigilar, Gregorio, Jr.
Design of a Threshold Channel, (Hydraulic Engineering: Saving a Threshold Resource—In Search of Solutions, Marshall Jennings, ed., and Nani G. Bhowmik, ed., 1992), with Panayiotis Diplas, p729-734

Villarreal, James
Time Series Prediction Using Neural Networks, (Expert
Systems for Civil Engineers: Knowledge Representation,
Robert H. Allen, ed., 1992), with Paul Baffes, p268-282

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Villars, Standards
see Gerath, Mark, (Environmental Engineering: Saving a
Threatened Resource—In Search of Solutions, F.
Pierce Linaweaver, ed., 1992), p122-127

see Summer, Wolfgang, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p683-688

Vilnay, O.

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Vine, David B.

Vine, David B.

Historic Seawalls of the Boston Harbor, Massachusetts Region: Evolution, Construction and Repair, (Ports '92, David Torseth, ed., 1992), with Peter S. Rosen, p849-867

Vinjamuri, Krishna

Densification/Creep Behavior of Experimental GlassCeramic Waste Forms for Immobilization of HighLevel Calcined Waste at the Idaho Chemical Processing Plant, (Engineering Mechanics, Loren D. Lutes, ed.
and John M. Niedzwecki, ed., 1992), p300-303

and John M. Niccizweck, ed., 1992, p.300-303
Waste Form Development for Immobilization of High
Level Waste Calcine at the Idaho Chemical Processing
Plant, High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with Swami V. Raman, Dieter A.
Knocht and James D. Herzog, pl 261-1271

see Tobiason, John E., (Environmental Engineering: Sav-ing a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p520-525

Vlaogradov, Oleg Explicit Equations of Motion of Discrete System of Disks in Two Dimensions, EM Sept. 92, p1850-1858

Vinson, T. S.
Tudor Road Rehabilitation, Anchorage, Alaska, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with J. W. Rooney, H. Zhou and N. Coetzee, p397-414

Vipolanandaa, C.
Bonding Strength of Grouts and Behavior of Silicate
Grouted Sand, (Grouting, Soil Improvement and
Geosynthetics, Roy H. Borden, ed., Robert O. Holtz,
ed. and Ilan Juran, ed., 1992), with A. Ata, p700-711

Properties of Cement Grouts and Grouted Sands with Additives, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with S. Shenoy, p500-51 Seepage Control in Kaolinite Clay with Simulated Cracks, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with M. Leung, p1054-1066

see Mebarkia, S., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p988-91

see Mebarkia, S., MT Feb. 92, p91-105

Virmani, J. K. see Rabe, W. J., Jr., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p488-493

Virmani, Y. P. see Ghorbanpoor, Al, (Nondestructive Testing of Concrete Elements and Structures, Farhad Ansari, ed. and Stein Sture, ed., 1992), p82-93

Vitasovic, Z. see Zhou, Siping, EE Nov./Dec. 92, p829-847

Vítek, Jan L. see Bažant, Zdeněk P., ST Jan. 92, p305-321

Vittori, G. Flow Field Induced by Sea Waves Over Brick-Pattern Ripples, HY Sept. 92, p1241-1259

Vivek, Vibhu

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Vives, Luis

An Approach for Incorporating Inflows Uncertainty in Management Models, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Jesús Carrera and Richard N. Palmer, p84-89

Vlahakis, J. see Doman, J. W., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1896-1902

Vlatas, Demetres A. see Singh, Amarjit, ME Jan. 91, p70-82

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Voegele, Michael D.
see Blanchard, Maxwell B., (High Level Radioactive
Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),

waste Management Frogram Committee, pp. 1052-1066
see Parsons, Michael W., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p671-678

Vogel, Koen R.

Routing of Heterogeneous Sediments over Movable Bed:
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Vogel, T. Two-Dimensional Analysis of Furrow Infiltration, with J. W. Hopmans, IR Sept./Oct. 92, p791-806

Vogstrang, C. H.
In-situ Stress and Strain Measurements in Dynamically
Loaded Asphalt Pavement Structures, (Road and Airport Pavement Response Monitoring Systems, Vincent
C. Janoo, ed. and Robert A. Eaton, ed., 1992), with S.
R. Bouman, p244-260

Voigt, James V.

Tolinical Auditors: A Positive Learning Experience, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p.1298-1302

von Bernuth, R. D. Simple and Accurate Friction Loss Equation for Plastic Pipe, IR Mar/Apr. 90, p294-298 disc: George Terzidis, IR May/June 92, p501-504

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see Roberds, William J., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1743-1750

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see Yang, J. N., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p828-831

Voon, B. K.

Structural Optimization in a Distributed Computing Environment, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with M. A. Austin, p778-785

Voorhies, Kenneth O.

Site Traffic Impact Analysis Process: The Developer's Perspective, (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), p205-210

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Vorobjev, V. N.
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Voes, Charles F.

see Nicholson, Thomas J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1437-1441

Voyladjis, George Z.
Micromechanical Characterization of Damage-Plasticity
in Metal Matrix Composites, (Engineering Mechanics,
Loren D. Lutes, ed. and John M. Niedzwecki, ed.,
1992), with Peter I. Kattan, p103-106

Vrettos, Christo

Evaluation of In Situ Effective Shear Modulus from Dis-persion Measurements, with Bernd Prange, GT Oct. 90, p1581-1585

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Waddle, Terry

Are High and Low Flow Habitat Values Really the Same?, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p374-379

Wade, Jan

Construction of a Far-Term (2020+AD) Lunar Base, (En gineering. Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with George W. Morgenthaler, Alex J. Montoya and Ann Campbell, p427-440

Planning Operations of Bulk Loading Terminals by Simulation, WW May/June 92, p300-315

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Wagner, L. R.
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see Ross, T. J., CP Oct. 92, p480-496 see Ross, T. J., CP Oct. 92, p497-514

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see Sykora, D. W., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p990-1005

Wakamatsu, Hisao see Asano, Hidekazu, (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1658-1669

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see Phernambucq, S. G., (Ports '92, David Torseth, ed., 1992), p316-321

Wakim, G. see El-Jabi, N., WW Mar./Apr. 92, p166-174

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see Santamarina, J. C., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p1380-1392

um, Markus

see Vaghar, Siamac, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p788-803

Waldon, Michael G.

disc. (of Delta Method for Estimating Primary Produc-tion, Respiration, and Reaeration in Streams, by Steven C. Chapra and Dominic M. Di Toro, EE Sept./ Oct. 91, p640-655), EE Nov./Dec. 92, p1006-1007

Waldron, R. D.

Value of the American Processes, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with A. H. Cutler, p690-703

Waldron, Robert D.

see Cutter, Andrew Hall, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p704-713

Walesh, Stuart G.
Retrofitting Storm Water Facilities for Quantity and
Quality Control, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of
Solutions, Mohammad Karamouz, ed., 1992), p786791

disc. (of Portrait of a Manager, by Paul Tarricone, CE Aug. 92, p52-54), CE Oct. 92, p31,33

Walker, James R.

The Application of Technology to Solving Practical Prob-lems, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p908-917

Hugnes, ed., 1992, p.908-917 Honolulu Harbor Ship Traffic Simulation and Animation Study, (*Ports '92*, David Torseth, ed., 1992), with Vedat Demirel and Michael C. Leue, p868-883 see Boudreau, Russell H., (*Ports '92*, David Torseth, ed., 1992), p248-262

Walker, Sherry T.

Thermal Investigation of a Large Lunar Telescope, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1842-1852

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Wall, Friedrich J.

Probabilistic Description of Buffeting Response of Long-Span Bridges, with Christian G. Bucher, EM Dec. 92, p2401-2420

Probabilistic Description of Buffeting Response of Long-Span Bridges: II, with Christian G. Bucher, EM Dec. 92, p2421-2441

Response Variability and Reliability of Plates Using the Weighted Integral Method, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with George Deodatis, p41-44

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Ductility and Detailing Requirements of Bearing Wall Buildings, with Jack P. Moehle, ST June 92, p1625-

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New Tools to Aid in Scientific Computing and Visualization, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Tracy L. Christian-Frear, -442, 448.

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see Rusten, Arnfinn, (Ports '92, David Torseth, ed., 1992), p616-629

Wallard, H. E.

Evolution of the French Policy Related to the Studies on Long-Lived Radioactive Waste Management, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p49-51

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Walley, D. M.

see Simpson, D. P., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p847-861

see Hosking, J. R. M., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p13-18

Walls, J. R. see Schultheis, T. M., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p960-965

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Management: Saving a Threatened Resource—In
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1992), p567-572

see Robiland, Paul D., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p573-578

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Lutes, ed. and John M. Niedzwecki, ed., 1992), p709-712

Walters, R. A.

see Foreman, M. G. G., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p574-85

Walters, Roy A.

A Study of Salt Transport Processes in Delaware Bay, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p240-251

Walton, Todd L., Jr.

Robust Approach to Wave Runup Calculation, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p879-891

p817-891
Wan, A. W. L.
A System for Measuring Moisture Transients in ClayBased Barrier Materials, (High Level Radioactive
Waste Management, High Level Radioactive Waste
Management Program Committee, 1992), with B. H.
Kjartanson, M. H. Spinney, H. S. Radhakrishna and
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see Kjartanson, B. H., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1129-1136

see Kuo, Jan-Tai, WR May/June 90, p349-361

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Buckling of Skew Plates and Corner Condition for Simply
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Wang, C. Y.
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disc. (of Elastic Stability of Heavy Rotating Columns, by C. M. Wang, EM Jan. 90, p234-239), EM Jan. 92, p218

Wang, Chi-Ping

Stress Relaxation Analysis for Sealants, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Frank E. Weisgerber, p240-243

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Theoretical Study of Stability Criteria for X-Bracing Sytems, with Arthur P. Boresi, EM July 92, p1357-1364

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Complete Biaxial Load-Deformation Behavior of RC Columns, with Cheng-Tzu Thomas Hsu, ST Sept. 92,
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Wang, Guang Qian see Ni, Jin Ren, HY Sept. 91, p1184-1194

Wang, Huanjin

Wang, Frankling Armourstone Within Aggregate Quarries, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), with John-Paul Latham and Alan B. Poole, p200-210

Wang, J. S. Y.

Variations of Hydrological Parameters of Tuff and Soil,

(High Level Radioactive Waste Management, High
Level Radioactive Waste Management Program Committee, 1992), p727-731

Wang, J. -Y.

Wang, J.-Y.
An Elasticity Solution for a Transversely Isotropic Material Containing a Spherical Shell Under Arbitrary Axisymmetric Loading, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with S. M. Heinrich, p1020-1023

Wang, Jin

A Non-Gaussian Fatigue Model for Offshore Structures, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with Loren D. Lutes, p463-466

see Lutes, Loren D., EM Jan. 91, p218-224

wang, JIB-THAN

Decision Support System for Multiobjective Service
Route Design, (Computing in Civil Engineering and
Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), with Jeff R.
Wright, p9-16

Wright, p9-16
Wang, Keb-Han
Flexible Porous Breakwater, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Xugui Ren, p224-227
Three-Dimensional Circulation Modeling of the Coastal and Ocean Environments, (Civil Engineering in the Oceans V. Robert T. Hudspeth, ed., 1992), p637-651
Three-Dimensional Scattering of Solitary Waves by Vertical Cylinder, with Theodore Y. Wu and George T. Yates, WW Sept./Oct. 92, p551-566

Wang, M. C.
Engineering Behavior of Water Treatment Sludge, with J. Q. Hull, M. Jao, B. A. Dempsey and D. A. Cornwell, EE Nov/Dec. 92, p848-864
Stress Wave Interaction in Finite Beam on Elastic Foundation, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with C. S. Little, p580-583

Wang, M. L.

Effect of Water on the Consolidation of Crushed Rock
Salt, (Engineering Mechanics, Loren D. Lutes, ed. and
John M. Niedzwecki, ed., 1992), with S. K. Miao, A.
K. Maji and C. L. Hwang, p531-534.

Wang, O. S.

Risk Assessment of Shipping Radioactive Waste Using the Standard Waste Box, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with R. F. Carlstrom, G. A. Coles and M. V. Shultz, p416-420

Wang, Pel-Fang
Review of Equations of Conservation in Curvilinear Coordinates, EM Nov. 92, p2265-2281

Wang, Ping Multivariable Analysis Using Isoparametric Finite Ele-ments, with William K. Rule, EM Aug. 92, p1730-1737

ments, with winiam K. Rule, EM Aug. 94, p1 30-1737
Wang, Sam S-Y.
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Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p416-421
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Jennings, ed. and Nani G. Bhowmik, ed., 1992),
p436-441

Wang, Shl-kang
A Hydraulic Study of Venous Valve Closure, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Yu-chen Qiu and Ned H. C. Hwang, p697-700

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Cable-Stayed Bridge Vibration Due to Road Surface
Roughness, with Dongzhou Huang, ST May 92,
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Computer Modeling Analysis for Highway Steel Bridge
Vibration, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), with
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Numerical and Analysis St.

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Numerical and Analytical Description of Highway Surface Roughness, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Mohsen Shahawy and Dongzhou Huang, p309-316 see Huang, Dongzhou, ST Dec. 92, p3427-3443

Wang, Tung-Ming
Fixed-End Moments and Thrusts of Planar Curved
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Wang, Y.
An Exact Stiffness Method for Dynamics of Layered Orthotropic Media, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with R. K. N. D. Rajapakse, p1008-1011

Wang, Y. P. Development of Design Spectra for Actively Controlled Wall-Frame Buildings, with A. M. Reinhorn and T. T. Soong, EM June 92, p1201-1220

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Wang, Vinan disc. (of Vibration of Beams and Trashracks in Parallel and Inclined Flows, by Thang D. Nguyen and Eduard Naudascher, HY Aug. 91, p1056-1076), HY Oct. 92, p1454-1456

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see Phatak, D. R., (disc), GT Dec. 90, p1902-1906 see Phatak, D. R., (disc), GT June 91, p973-978

Wankerl, M. W. see Johnson, P. E., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1310-1316

Wanless, Brent GPS/Positioned Digital Video for Airborne GIS Data Acquisition, SU Aug. 92, p80-89

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Ward, D. B. see Siegel, M. D., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1972-1984

Ward, David S.

Ward, David S.
Strategies for Groundwater Model Application Through
GIS, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed.
and Nani G. Bhowmik, ed., 1992), with Robert M.
Greenwald and P. Srinivasan, p32

Ward, Donald L. Physical Model Testing of Broken Armor Stone, (Dwrability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p34-39

Ward, Frank E.

see McBee, William C., (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p116-127

Ward, G. H.
see Holley, E. R., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p593-598
see Su, Y. C., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p243-248

Ward, Matthew O.

Testing Pavement Image Processing Systems: An Engineering Approach, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Tahar El-Korchi, Norman Wittels and Michael A. Gennert, p41-62

Ward, Thomas

Planning/Analysis of VPA's Norfolk North Terminal, (Ports '92, David Torseth, ed., 1992), with Richard A. Woodman and Bernardo de Castilho, p134-142

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Wardle, G.

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see Dedrick, A. R., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600

Wark, Robert J.

The Construction of New Victoria Dam, Australia, (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), with Warwick T. Dart, Graeme B. Mann and Brian R. Gillon, p63-82

Warner, James
Compaction Grout: Rheology vs. Effectiveness, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p229-239

1992), p242-239

Recent Advances in Compaction Grouting Technology,
(Grouting, Soil Improvement and Geosynthetics, Roy H.
Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed.,
1992), with Norbert Schmidt, John Reed, Don
Shepardson, Russ Lamb and Sam Wong, p252-264

see Comes, Gregory D., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1177

Warner, Kayleen

see Putty, Roger G., (Water Resources Planning and Man-agement: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p774-779

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see Xu, K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p693-696

Warnock, J. Gavin

The State of the Art in Tidal Power Recovery, (Ocean En-ergy Recovery: the State of the Art, Richard J. Seymour, ed., 1992), with Robert H. Clark, p4-33

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see Lovett, Thomas G., CE Apr. 92, p42-45

Warren, William E.

Large Deformation Elastic Behavior of Low-Density Solid Foams, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Andrew M. Kraynik, p143-146

Warrick, A. W.

disc. (of Irrigation Uniformity Relationships for Irriga-tion System Management, by Albert J. Clemmens, IR Sept./Oct. 91, p662-699) with M. Yitayew, IR Nov./ Dec. 92, p1007-1008

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Land Reciamation Design for the Port of Los Angeles' 2020 Plan, (Ports '92, David Torseth, ed., 1992), with R. Wittkop, p577-590

Wasantha Lal, A. M.

A TVD MacCormack Method for Open Water Hydraulics and Transport, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jenning, ed. and Nani G. Bhownik, ed., 1992), p494.

Underground Refrigeration Outlets, (Ports '92, David Torseth, ed., 1992), p682-694

Washbura, Libe

Mixing, Dispersion, and Resuspension in Vicinity of Ocean Wastewater Plume, with Burton H. Jones, Alan Bratkovich, T. D. Dickey and Ming-Sue Chen, HY Jan. 92, p38-58

Washington, Gregory
Modeling and Analysis of Doubly Curved Aerobrake
Truss Structures, Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), with Eric Klang,
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Wasywich, K. M.

Behaviour of Used CANDU Fuel Stored in 150°C Mois-ture-Saturated Air, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), with C. R. Frost, p1166-1173

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Waters, W. Allen, Jr.

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Comparison of ARS-Type Grade Control Model Testing and Prototype Response, (Hydraulic Engineering: Scring ing a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with N. Raphelt, P. Combs and S. Abt, p213-218

Watson, C. J. H.
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Watson, Keith D. see Gebert, Jeffrey A., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p503-519

Wattenberg, Jacob
The Foundation for a Successful Traffic Impact Analysis,
(Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and
T. C. Sutaria, ed., 1992), p11-15
see Pollock, Joseph B., Ir., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell,
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1992), p104-108

Watts, George disc. (of Breakwater Breakthrough—Bold New Breakwaters, by William F. Baird, Kevin Hall and Virginia Fairweather, CE June 87, p43-48) with Javier Weckman, CE June 87, p43-44

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Watts, Randall W. see Motz, Louis H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p281-286

Wayson, Roger L. Transportation Planning and Air Quality, 1992, 0-87262-815-9, 374pp.

Weatherhead, E. K. see Afzal, Javaid, IR Mar./Apr. 92, p218-228

Weaver, K. D.

Wester, B. D. Grouting for Hazardous Waste Site Remediation at Nec-co Park, Niagara Falls, New York, (Grouting. Soil Im-provement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with R. M. Coad and K. R. McIntosh, p1332-1343

Weaver, Ken Grouting Against Hazwaste, with R. M. Coad and K. R. McIntosh, CE May 92, p70-72

Weaver, Keaneth D.
A Geologist's Perspective on Dam Foundation Grouting, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p639-650

Weaver, Timothy O. see Heideman, John C., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p496-517

Webb, Deamis W. Ship Simulation of the Houston Ship Channel, Houston, Texas, (Ports '92, David Torseth, ed., 1992), with J. Christopher Hewlett, p898-911

Webb, Denais Wayne
Use of Portable Simulator in Designing Channel Improvements for Port of Brownsville, Texas, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Larry Leon Daggett, p598-614

Webb, Tony
Design Procedures for Effluent Discharge to Estuaries
During Ebb Tide, with Rodger B. Tomlinson, EE May/
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Weber, Harold see McBee, William C., (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), pl 16-127

Weber, Lan-Yin Li
Urban Development on Alluvial Fans, (Housing America
in the Twenty-First Century, Mehmet Inan, ed., 1992),
with Virginia Bax-Valentine, p11-18

Weber, Thomas L. see Benjamin, Bennie L., CE Dec. 92, p44-47

Webster, Anthony C. A Case of the Shakes, with Matthys P. Levy, CE Feb. 92, p58-60

Wechsler, Marius B.

disc. (of Bridge Evaluation for Multipresence of Vehicles, by Baidar Bakht and Leslie G. Jaeger, ST Mar. 90, p603-618), ST Jan. 92, p334

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Weerasuriya, Sujeeva A.
Oil Under Ice: Buoyancy Viscous Spreading, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Poojirha D. Yapa, p102-107

Weesakul, Sutat

Harbour Development in Southern Part of Thailand (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p353-369

Weggel, J. Richard see Sorensen, Robert M., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p189-204

Weghorst, Paul A.

Information Management in Water Resources: Database and GIS Integration, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Ali Diba, Darrell Dyke and D. Burnell Cavender,

see Elliott, Ronald L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p134-139

Wehbe, N. see Gordaninejad, F., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p696-709

Wei, Eugene J.

Wei, Engene J. Simulation of Three-Dimensional Hydrodynamics in Long Island Sound: Seasonal Timescale, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p430-440

Wei, F. S.

see Zhang, De-Wen, AS July 92, p337-346

Wei, Meijiu

wet, merun Interface Friction of Polypropylene Straps, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Abdelmalek Bouazza, pl175-1187

Weiergang, Jesper see Ellegaard, A. Christina, (Estuarine and Coastal Mod-eling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p188-201

Weihs, D.

disc. (of Hypervelocity Impact Penetration Phenomena in Aluminum Space Structures, by William P. Schonberg, AS July 90, p173-185), AS Apr. 92, p258-259

AS July 90, pt. 75-183), AS Apr. 92, pt. 38-239
Weil, Gary J.
Infrared Thermographic Sensing of Sewer Pipeline Problems, (Water Resources Planning and Management:
Saving a Threatened Resource—In Search of Solutions,
Mohammad Karamouz, ed., 1992), p890-895
Non-Destructive Testing of Bridge, Highway and Airport
Pavements, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J.
Goodno, ed. and Jeff R. Wright, ed., 1992), p11211128

vreuser, R. F.
Near-Field Radiation Doses from Transported Spent Nu-clear Fuel, (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Pro-gram Committee, 1992), with K. S. Neuhauser, p1205-1208

Weisberg, Robert H.
see Galperin, Boris, (Estuarine and Coastal Modeling, Malcolm I. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p332-343

see Wang, Chi-Ping, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p240-243

nan, Richard N.

Design Manual for Coastal Fluidization Systems, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Gerard P. Lennon and James E. Clausner, p862-878

see Lennon, Gerard P., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p654-659

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see Dimmitt, A. K., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p294-299

Welch, Douglas

Technology Transfer Lessons from a U.S. Water District, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Karen McLaughlin, p203-208

Welch, T. D.

see Notz, K. J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p122-130

Welch, Tim D.

Utilization of ORIGEN2 by the Characteristics Data Base, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Karl J. Notz, p72-76

Wellman, G. W.

see Salzbrenner, R., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2241-2248

Criticality Safety and Shielding Design Issues Related to Transport Cask Design, (High Level Radioactive Waste Management, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2151-2155

Wells, Martin J.

Colgate Palmolive Transportation Impact Case Study, (Site Impact Traffic Assessment: Problems and Solu-tions, Robert E. Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria, ed., 1992), with Jay S. Bockisch, p154-158

Wells, S.

see Crowe, B., (High Level Radioactive Waste Manage-ment, High Level Radioactive Waste Management Program Committee, 1992), p1997-2013

Synchrotron Radiation Measurements of Degree of Saturation in Porous Matrix, with Richard I. Dick, EM Aug. 92, p1738-1744

Welsh, J. P.

see Maher, M. H., (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), p855-866

Welsh, Joseph P.
Grouting Techniques for Excavation Support, (Excavation and Support for the Urban Infrastructure, T. D.
O'Rourke, ed. and A. G. Hobelman, ed., 1992), p240-

Weltz, Mark A.

Hydraulic Roughness Coefficients for Native Rangelands, with Awadis B. Arslan and Leonard J. Lane, IR Sept./ Oct. 92, p776-790

Wempner, Gerald Complementary Potentials of Finite Elasticity, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p506-509

see Yeh, William W.-G., WR Nov./Dec. 92, p636-653

Wen, Y. K. see Cherng, Rwey-Hua, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p49-52
see Yao, Timothy H.-J., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p527-530

Wendorf, Robert J.

Quartzite—A Hard Rock Approach to Rubble Mounds, (Durability of Stone for Rubble Mound Breakwaters, Orville T. Magoon, ed. and William F. Baird, ed., 1992), p151-159

Wase, Clas-Otto
Validation, Acceptance and Licensing: How Much Scientific Facts Can the Process Digest?, High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p110-115

Weng, C. C.

Weag, C. C.
Compression Tests of Cold-Formed Steel Columns, with
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disc. (of Management of Engineering/Design Phase, by Neil N. Eldin, CO Mar. 91, p163-175), CO June 92, p416-417

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Influence of Structure and Composition on Residual
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clo: GT Feb. 92, p349-351
err: GT May 92, p837

Wessels, William R. On-Orbit Chipless Cutting and Tube Welding in Space Station Freedom, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Mitchell D. Mulder and Brace B. Daniel, p815-826

West, J. R.

see Guymer, I., HY May 92, p718-734

West, Robert C.

Improving International Competitiveness, El Apr. 92, p107-112

Westerink, J. J.

Westerian, J. J.
Tide and Storm Surge Predictions Using Finite Element
Model, with R. A. Luettich, A. M. Baptista, N. W.
Scheffner and P. Farrar, HY Oct. 92, p1373-1390
see Luettich, R. A., Jr., (Estuarine and Coastal Modeling,
Malcolm L. Spaulding, ed., Keith Bedford, ed.,
Alan Blumberg, ed., Ralph Cheng, ed. and Craig
Swanson, ed., 1992), p632-643

Westeriak, Joannes J.
Tide and Hurricane Storm Surge Computations for the
Western North Atlantic and Gulf of Mexico, (Estuarine
and Coastal Modeling, Malcolm L. Spaulding, ed.,
Keith Bedford, ed., Alan Blumberg, ed., Raiph Cheng,
ed. and Craig Swanson, ed., 1992), with Julia C. Muccino and Richard A. Luettich, p538-550

Westerman, R. E., see Goodwin, F. E., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1681-1686

ervelt, Jar

see Vieux, Baxter E., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p712-718

Wetzel, John P.

see Johnson, Stewart W., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1853-

see Johnson, Stewart W., AS July 92, p323-336

Whang, Joo-Ho see Choi, Jong-Won, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p2278-2283

Wheeler, William disc. (of Velocity and Depth of Flow Calculations in Partially Filled Pipes, by A. Saatçi, EE Nov/Dec. 90, p1202-1208), EE May/June 92, p451-454

Whelan, Joseph F.

Whethan, Joseph F.
Paleohydrologic Implications of the Stable Isotopic Composition of Secondary Calcite Within the Tertiary Volcanic Rocks of Yucca Mountain, Nevada, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with John S. Stuckless, p1572-1581

Whipple, William, Jr.
Delaware Estuary Nonpoint Source Control Program,
(Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Van Dyke Polhemus,
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p118-723 Statewide NPS Management Strategies, (Water Resources Planning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Vincent H. Berg and Eric H. Livingston, p843-848

Whitaker, S. H.

see Dormuth, K. W., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1737-1742

White, Benjamin

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White, D. W.

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White, Lynn see Sieger, Ronald B., CE Sept. 92, p36

White, M. W.

see Dolan, J. D., ST Dec. 92, p3473-3479

White, Peter

Waste Water Management at Bulk Terminals, (Ports '92, David Torseth, ed., 1992), p178-188

White, Richard N.
see Valenzuela, Mark L., (Computing in Civil Engineering
and Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p229-236

White, T. D.

Limiting Design Parameters for Accelerated Pavement-Testing System, with J. M. Albers and J. E. Haddock, Sr., TE Nov./Dec. 92, p787-804

Pavement Subdrainage Instrumentation in Indiana: A Case Study, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), with Zubair Ahmed, p415-425

White, Thomas D.
An Accelerated Pavement Testing System, (Road and Airport Pavement Response Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), pl 12-124

Materials: Performance and Prevention of Deficiencies and Failures, 1992, 0-87262-880-9, 776pp.

White, Wayne N., Jr.
Salvage Law for Outer Space, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2412-2422

Whiteside, Peter G. D.

see Selwood, Jan R., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p942-949

Whiteside, Stephen L. see Wooten, R. Lee, CE Jan. 92, p52-54

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Whitlock, Arland W.
see Herrin, Janet C., (Water Resources Planning and
Management: Saving a Threatened Resource—In
Search of Solutions, Mohammad Karamouz, ed.,
1992), p293-298

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Whitemore, Ray C. see Hinton, Steven W., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p387-389

Wholley, Thomas Roundtable Discussion Sessions, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), p271-275

Calibrating SHE Soil-Erosion Model for Different Land Covers, with J. C. Bathurst and C. W. Johnson, IR Sept./Oct. 92, p708-723

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Threatened Resource—In Search of Solutions, Ted
Engman, ed., 1992), p481-486
see Gilley, John E., (Hydraulic Engineering: Saving a
Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed.,
1992), p747-752.
see Gilley, John E., IR Jan./Feb. 92, p104-112

Wigan, M. R.

Image-Processing Techniques Applied to Road Problems, TE Jan./Feb. 92, p62-83

Wigfield, James N., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p204-209

Wight, J. K. see Ehsani, M. R., ST Mar. 90, p751-767

Wijedasa, Hewa A.
Statistical Decision Analysis for Interception Wells, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Marian W. Kemblowski, pl16-121

Wijeweera, H.

Temperature-Independent Relationships for Frozen Soils, with R. C. Joshi, CR Mar. 92, p1-21

Wilcox, Benson R.
see Ha, Belinda, (Engineering Mechanics, Loren D. Lutes,
ed. and John M. Niedzwecki, ed., 1992), p836-839

Wildbore, Phil

Wildow, Phili The Importance of Verified Simulation Model in a Sewer-age Rehabilitation Program, (Water Resources Plan-ning and Management: Saving a Threatened Re-source—In Search of Solutions, Mohammad Karamouz, ed., 1992), p730-735

Wildrick, Brenda

see Sause, Richard, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p214-221

Wilhelm, A.
see Parsons, L. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p839-845

Wilhelma, Steven C.
Design of Pneumatic Diffuser System, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Charles W. Downer and Richard E. Price, p1035-1060
Gas Transfer in Diffused Bubble Plumes, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Sandra K. Martin, p317-322 see Gulliver, John S., (disc), EE Mar/Apr. 90, p361-375

Witkes, William R.

William R. Bistopis: Separation of <sup>3</sup>He/<sup>4</sup>He From Solar Wind Gases Evolved from the Lunar Regolith, (Engineering, Construction, and Operations in Space 111, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Layton J. Wittenberg, p547-554

Wilkinson, Gordon see Herbich, John B., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p1069-1082

Free Vibration Analysis of Asymmetric Buildings, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with David Thambiratnam, p461-465.

Recent Experiences in PC Software Development, (Com-puting in Civil Engineering and Geographic Informa-tion Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Asquith Bailey and Timo-thy Dodd, p1195-1203

Willem, Kesp

Distributed Failure Analysis, Fallacies and Remedies, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Andreas Dietsche, Guillermo Etse and Paul Steinmann, p772-775

see Happel, John Amin, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p112-122

Willar, L. A.

see Swint, D. O., (Engineering, Construction, and Opera-tions in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p2147-2160

see Kandil, H. M., IR Jan./Feb. 92, p113-121

Willardson, Lyman S.
Design of Transient and Steady State Drain Spacing, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Masoud Alemi, p57-62

see Neale, Christopher M. U., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solu-tions, Ted Engman, ed., 1992), p311-316

nbrock, J. H.

see Syal, M. G., (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p207-

see Syal, M. G., CO Dec. 92, p651-666

Willenbrock, Jack

see Syal, Matt, CC Aug. 92, p10-11

Willenbrock, Jack H.

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Screen Breakwaters, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with W. W. Crull, p332-335

w. w. Crust, p332-333
Simulation of Nonlinear Wave Runup on Steep Impermeable Slopes, (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), with W. G. McDougal, S. Zhang and S. N. Stevenson, p203-217
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see Moubayed, W. I., (Civil Engineering in the Oceans V, Robert T. Hudspeth, ed., 1992), p188-202

Williams, David T.
Evaluation of Erosion Potential at Pipeline Crossings, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhownik, ed., 1992), with Samuel Carroon, Jr. and Jeffrey B. Bradley, p689-694

Williams, G. W. see Duncan, J. M., GT Dec. 91, p1833-1847

Williams, J. W.

Economic Analysis of Including an MRS Facility in the
Waste Management System: A Revisit, (High Level Radioactive Waste Management, High Level Radioactive
Waste Management Program Committee, 1992), with
C. Conner, A. J. Leiter and E. Ching, p1903-1908

Williams, Jerry W.
Integrated GIS Solutions with Civil Engineering Projects, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p328-331

Williams, John R.
Particle Analysis of Material Behavior—A Note on Continuum Assumptions, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p179-183

Williams, Kyle
The Feasibility of Using Solar Optics for Lunar Base
Lighting, (Engineering, Construction, and Operations in
Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and
Russell J. Miller, ed., 1992), with David Eijadi, p260275

Williams, Mary E.

Measuring Ozone by Indigo Method: Interference of Sus-pended Material, with Jeannie L. Darby, EE Nov./Dec. 92, p988-993

94, p786-973
Williams, Phillip B.
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Williams, R. F., See Rodwell, E., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1373-1380
see Shaw, R., (High Level Radioactive Waste Management Program Committee, 1992), p869-873

Williams, Robert S. Surveying Advantage, CC Aug. 92, p1-3,14

Williams, Trefor P.
Neural Network for Predicting Concrete Strength, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Anil Khajuria and P. Balaguru, p1082-1088

Williamson, A. C. see Attaway, C. R., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1336-1342

Williamson, Albert N. see Albertson, Paul E., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p505-510

Williamson, Deirdre see Benson, Allen, (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1917-1920

Willis, Joe C. see Kuhnle, Roger A., HY Oct. 92, p1443-1446

Willis, Robert

Optimization Models for Groundwater Development, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Miquel Mariño, p1244

see Finney, Brad A., WR Jan./Feb. 92, p18-31 see Matsukawa, Joy, WR Mar./Apr. 92, p115-132

disc. (of Tort Reform and Design Professional, by Dennis R. Schapker, El July 90, p258-265), El July 92, p319-

Willis, Yolaz

Compression Planning" for Continuous Improvement in Quality Programs, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Frank C. Hood, pj.287-1297

h-House Training, Formal Education and Public Out-reach, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2.190-2201

Wilsnack, Mark M.

Groundwater Management in Southern Florida, (Irriga-tion and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p104-109

Wilson, E. L. see Choi, Chang-Koon, ST Apr. 92, p944-954

Wilson, F. R. see Faig, W., TE Nov./Dec. 92, p850-865

Wilson, John A.

Utilization of Economical Slopes for Jordanelle Dam,
(Stability and Performance of Slopes and Embankments
II, Raymond B. Seed, ed. and Ross W. Boulanger, ed.,
1992), with William O. Engemoen, Francis G. McLean
and Perry J. Hensley, p653-668

wilson, John L.
see Sanvido, Victor E., El July 92, p261-278
see Sause, Richard, (Computing in Civil Engineering and
Geographic Information Systems Symposium,
Barry J. Goodno, ed. and Jeff R. Wright, ed.,
1992), p214-221

Wilson, Kenneth C. see Nnadi, Fidelia N., HY Dec. 92, p1670-1684

Wilson, Michael L.

Comparison of Two Conceptual Models of Flow Using the TSA, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p882-890

see Gauthier, John H., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p891-898

Wilson, P. N. see Dedrick, A. R., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p595-600

Wilson, Tom

see Romine, Russell, (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p146-159

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Winandy, J. E.

Effects of CCA Treatment and Drying on Tensile
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Mitchell, MT Aug. 92, p240-251

Winant, Clinton D. see List, E. John, HY Oct. 90, p1158-1179

Winford, James W., Jr. see Brown, E. R., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p216-230

Wingate, Charles see Forslund, David W., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p514-518

Wingefors, S.
see Andersson, J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p2109-2113

Wingo, Dennis R. see Bankston, Cheryl D., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p897-

Winn, Stewart D., Jr. Rehabbing the Rails, CE Sept. 92, p54-57

Wister, Marsie
Jefferson Parish Storm Water Management, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad
Karamouz, ed., 1992), with Kent Dussom, p457-461

Winterstein, S. M. TLP Fatigue Due to Second-Order Springing, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with T. Marthinsen and T. C. Ude, p455-458

Winterwerp, Johan C. Hyperconcentrated Sand-Water Mixture Flows over Ero-dible Bed, with Willem T. Bakker, Dick R. Mastbergen and Henk van Rossum, HY Nov. 92, p1508-1525

Wirasinghe, S. C. see Bandara, S., TE Mar./Apr. 92, p187-206

Wirsching, P. H. see Kung, C. J., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p436-439

Wise, Todd K.
see Bell, Larry S., AS Apr. 92, p230-247
see Pulley, John, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture,
ed. and Russell J. Miller, ed., 1992), p483-492

Wiser, Edward P. see Touran, Ali, CO June 92, p258-272

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Withiam, James L. see Pearlman, Seth L., (Stability and Performance Slopes and Embankments II, Raymond B. Seed, e and Ross W. Boulanger, ed., 1992), p1333-1348

Witt, Charles see Golliher, Kenneth, (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p615-619

Witte, Hans-H. see Raudkivi, Arved J., HY Sept. 90, p1063-1079

Wittels, Norman see Ward, Matthew O., (Road and Airport Pavement Re-sponse Monitoring Systems, Vincent C. Janoo, ed. and Robert A. Eaton, ed., 1992), p41-62

Wittenberg, Layton J.
In-aitu Release of Solar Wind Gases from Lunar Soil, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p537-546
see Wilkes, William R., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p547-554.

Wittenberg, Peter
Ecuador—The Lower Guayas Flood Control and Drainage Project—A Case Study, (Irrigation and Drainage:
Saving a Threatened Resource—In Search of Solutions,
Ted Engman, ed., 1992), with Walter Ochs, p275-280

Wittkop, R. see Warwar, J., (Ports '92, David Torseth, ed., 1992), p577-590

p371-390
Wittwer, C. S.
Design of a Three-Dimensional Site-Scale Model for the Unsaturated Zone at Yucca Mountain, Nevada, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with G. S. Bodvarsson, M. P. Chornack, A. L. Flint, L. E. Flint, B. D. Lewis, R. W. Spengler and C. A. Rautman, p263-271

Winff, Rasmus disc. (of Suspended Sediment-Transport Capacity for Open Channel Flow, by Ismail Celik and Wolfgang Rodi, HY Feb. 91, p191-204), HY May 92, p823-825

Włodarczyk, T.
see Tamm, J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management
Program Committee, 1992), p1777-1785

Wohlpart, A.
Waste Caretakers: Who Will They Be?, (High Level Radioactive
Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p1485-1490

Wohlpart, Alfred see Powell, Richard R., (High Level Radioactive Waste Management, High Level Radioactive Waste Man-agement Program Committee, 1992), p1494-1498

Wolchuk, Rom

Secondary Stresses in Closed Orthotropic Deck Ribs at Floor Beams, with Alexis Ostapenko, ST Feb. 92, p582-595

Woldt, W.
A Screening Method to Rank Landfills Based on Relative
Environmental Hazard, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), with M. Hagemeister,
D. Jones and M. Dahab, p411-416

Woldt, W. E. see Dahab, M. F., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p543-548

Wolf, John P.
Cone Models for a Pile Foundation, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with Jethro W.
Meek and Chongmin Song, p94-113
see Meek, Jethro W., GT May 92, p667-685
see Meek, Jethro W., GT May 92, p686-703

Wolf, Lisa see Gerath, Mark, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p122-127

Wolf, Steven H.

Woll, Steven H.
Assessment of Impacts Associated with Alternate Cooling
System Designs for an Electric Power Station, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver,
ed., 1992), with James D. Bowen, Donald P. Galya and
Frank S. Smith, p226-231
see Bowen, James D., (Ports '92, David Torseth, ed.,
1992), p443-455

Hanford Defense Waste Separation Options, (High Level Radioactive Waste Management, High Level Radioac-tive Waste Management Program Committee, 1992), with W. B. Barton and D. G. Sutherland, p1701-1710

Wolfe, Robert E.

Providing Lead Role in Work-Force Diversity, with Marie E. Anspach, El Jan. 92, p38-48

Wolff, Thomas F.

out, I housas P.
Sc. (of Improved Design Procedures for Vertically Loaded H-Piles in Sand, by Harry M. Coyle and Ronald Ungaro, GT Mar. 91, p507-528) with Patrick J. Conroy, GT July 92, p1133-1136

Wollenberg, H. A.
see Flexser, S., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1593-1598

Wolock, David

Wossex, David Topographic Effects on Stormflow Acidity, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p878-883

Wolters, W.

see Smedema, L. K., IR Nov./Dec. 92, p841-851

Wong, Dan S.

see Rusten, Arnfinn, (Ports '92, David Torseth, ed., 1992), p616-629

Wong, G. S. see Rollings, R. S., (Materials: Performance and Preven-tion of Deficiencies and Failures, Thomas D. White, ed., 1992), p16-30

Wong, H. L.

see Luco, J. E., GT May 92, p780-795

Wong, K. L.
Design and Performance of Bath County Upper Dam and
Reservoir Slopes, (Stability and Performance of Slopes
and Embankments II, Raymond B. Seed, ed. and Ross
W. Boulanger, ed., 1992), with D. E. Kleiner, A. M.
Wood, M. C. Geary and R. G. Oechsel, p371-386

disc. (of Extended Split-Hopkinson Bar Analysis for Attenuating Materials, by Conrad W. Felice, Edward S. Gaffney and Joseph A. Brown, EM May 91, p1119-1135), EM Nov. 92, p2330-2332

Wong, Kuo-Chuin

Lagrangian Motions in Simple Kinematic Oscillatory Flow Field, WW Jan/Feb. 91, p29-43 disc: A. Odulo and M. Reed, WW May/June 92, p318-320

Wong, Noel C.

Final Design and Construction of Gibraltar Dam
Strengthening, Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed.,
1992), with Theodore B. Feldsher, Robert S. Wright
and David H. Johnson, p440-458

Wong, Ping K.

see Cohen, Julie Mark, CF Feb. 92, p3-11

Wong, Sam see Warner, James, (Grouting, Soil Improvement as Geosynthetics, Roy H. Borden, ed., Robert ( Holtz, ed. and Ilan Juran, ed., 1992), p252-264

Wong, Siu Tee

see Pan, Tso-Chien, CF Aug. 92, p137-150

Wong, Tommy S. W.

disc. (of Physically Based Flood Features and Frequen-cies, by Hsieh Wen Shen, Gregory John Koch and Jay-antha T. B. Obeysekera, HY Apr. 90, p494-514), HY Apr. 92, p637-638

Wong, Yilk-Diew

see Lum, Kit M., (Utilization of Waste Materials in Civil Engineering Construction, Hilary I. Inyang, ed. and Kenneth L. Bergeson, ed., 1992), p240-249

Wonink, Peter

see Schuurmans, Wytze, IR May/June 92, p360-369

see Brimley, W. J. G., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1413-1422

Woo, Yi-Ren

see Brandner, Theresa E., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p705-708

Wood, A. M.

see Wong, K. L., (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p371-386

Wood, Don J. see Boulos, Paul F., HY Nov. 90, p1329-1344

Wood, Donald D.

see Taylor, Peter, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1442-1448

Wood, James D.

see Magette, William L., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p407-412

see Hjelmstad, K. D., ST Jan. 92, p223-242

Wood, Sharen L.

see Robertson, James B., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p317-322

Wood, Sharon L.

Seismic Response of R/C Frames with Irregular Profiles, ST Feb. 92, p545-566

Wood, Tamara M.
Modeling the Pathways of Nonconservative Substances in Estuaries, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed., and Craig Swanson, ed., 1992), with António M. Baptista, p280-291

Woodard, John see Borovetz, Harvey S., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p713-716

Woodard, M. J.

Evaluating Polymer Concrete Bridge Expansion Joints Using Acoustic Emission, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with S. S. Kuo, p409-412

Woodcock, Gordon R.
Towards a Spacefaring Civilization, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992). p2008-2022

Woodman, Richard A. see Ward, Thomas, (Ports '92, David Torseth, ed., 1992), p134-142

Woods, Richard D. see Chang, Tzyy-Shiou, GT Aug. 92, p1216-1233 see Maher, Mohamad H., GT July 90, p1116-1131

Woods, Thomas W.

Program Analysis and Compliance Management, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Dillard B. Shipler, p1724-1729

Woodward, D. E.

Progress Report ARS/SCS Runoff Curve Number Work Group, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with W. J. Gburek, p378-382

see Banasik, K., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p493-498

Woodward, Donald E.

Woodward, Donaid E. disc. (of Investigation of Curve Number Procedure, by Allen T. Hjelmfelt, Jr., HY June 91, p725-737) with Roger Cronshey, HY June 92, p951 see Merkel, William H., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p859-864

Woolhiser, David A. disc. (of Kinematic Wave Controversy, by Victor M. Ponce, HY Apr. 91, p511-525), HY Sept. 92, p1337-

Wootan, D. W. see Rawlins, J. A., (High Level Radioactive Waste Man-agement, High Level Radioactive Waste Manage-ment Program Committee, 1992), p1711-1717

Dams Going Safely over the Top, with George R. Powledge and Stephen L. Whiteside, CE Jan. 92, p52-54

disc: Robert Day, CE May 92, p36 clo: CE May 92, p36,38

Wootton, Thomas P.
Status of ASCE Handbook of Hydrology, (Hydraulic Engineering: Saring a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p448-451

Worden, Simon P.

A New Era in Space Operations, (Engineering, Construc-tion, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p1475

Workman, S. R.

Assessing the Leaching Potential of Herbicides at the Ohio MSEA, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with A. D. Ward and W. G. Knisel, p413-418

Worley, J.

see Fang, I.-K., ST Mar. 90, p659-678

Wörman, Anders Incipient Motion during Static Armoring, HY Mar. 92, p496-501

Wren, Jon R.

see Borja, Ronaldo I., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p284-287

Wrenn, Jamie B. see Summerell, B. Ray, CE June 92, p52-54

Wright, James L. see Katul, Gabriel G., IR July/Aug. 92, p601-618

Wright, Jeff R. see Benabdallah, Salah, UP Mar. 92, p24-40

see Goodno, Barry J., ed., Computing in Civil Engineer-ing and Geographic Information Systems Symposi-

see Lutz, Charles H., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p108-113 see Wang, Jin-Yuan, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p9-16

Wright, Julie see Cavacas, Alan, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p96-101

Wright, Peter see Darmody, Tom, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p272-280

Wright, Raymond M.
Calibration and Validation of the Storm Water Management Model to the Providence Area Combined Sewer System, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Igor Runge, Rajat Roy Chaudhury and Daniel W. Urish, p462-467

Wright, Robert L. see Hypes, Warren D., (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p249-

Wright, Robert S., see Wong, Noel C., (Roller Compacted Concrete III, Kenneth D. Hansen, ed. and Francis G. McLean, ed., 1992), p440-458

Wright, S. J. see Bühler, J., HY Mar. 92, p442-459

Wright, Stephen G.
The Role of Benchmark Problems in Slope Stability Com putations, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), p1067-1069

Wroblewski, Michael R. see Klingler, Charles F., SU Nov. 92, p130-134

Wu, Chian Min
disc. (of Real-Time Operation of Tanshui River Reservoirs, by Jan-Tai Kuo, Nien-Sheng Hsu, Wen-sen Chu, Shian Wan and Youn-Jan Lin, WR May/June 90, p349-361), WR Mar/Apr. 92, p206-207

Wa, H. C.
see Li, Victor C., (Engineering Mechanics, Loren D.
Lutes, ed. and John M. Niedzwecki, ed., 1992), p740-743

Wu, Jonathan T. H.
disc. (of Laboratory Model Study on Geosynthetic Reinforced Soil Retaining Walls, by I. Juran and B. Christopher, GT July 89, p905-926) with Fumio Tatsuoka, GT Mar. 92, p496-498

Mail. 74, pr30-750

Wa, K. Chauncey

Analysis of Space Crane Articulated-Truss Joints, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with Thomas R. Sutter, p320-331 see Sutter, Thomass R. (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), p296-307

Wu, Ming-Chee see Cawifield, Jeffrey D., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p232-235

Wu, T. H. see Reddi, Lakshmi N., (disc), GT Oct. 90, p1502-1520

We, T.S.

Preliminary Circulation Simulations in Apalachicola Bay, (Estuarine and Coastal Modeling, Malcolm L. Spauloing, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with W. K. Jonet, 9344-356

Verification of a Three-Dimensional Modeling in Apalachicola Bay, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p422-427

Wu, Theodore Y. see Wang, Keh-Han, WW Sept./Oct. 92, p551-566 Wu, Tien H. see Reddi, Lakshmi N., GT June 91, p872-890

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See Zini, W. Q., Em mai. 72, pro-2-3.

Wei, X.

Neural Network-based Modeling of Composite Material with Emphasis on Reinforced Concrete, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with J. Ghaboussi, pl.179-1186

see Garrett, J. H., Jr., (Expert Systems for Civil Engineers: Knowledge Representation, Robert H. Allen, ed., 1992), p104-143

see Ghaboussi, J., EM Jan. 91, p132-153

see Ghaboussi, J., EM Jah. 91, p. 132-133
Wu, Y.-T.
Probabilistic Rotordynamics Analysis Using an Adaptive
Importance Sampling Method, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K.
Lin, ed., 1992), with T. Y. Torng, O. H. Burnside and
M. H. Rheinfurth, p491-494
Structural Reliability Analysis Methods for Implicit Performance Functions, (Probabilistic Mechanics and
Structural and Geotechnical Reliability, Y. K. Lin, ed.,
1992), p483-486
see Gureghian, A. B., (High Level Radioactive Waste

see Gureghian, A. B., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p985-993

Wunderlich, Walter O.
Probabilistic Methods in Hydroproject Maintenance, (Hydraulic Engineering: Saving a Threatened Resource—in Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p514-519

and Nani G. Bhowmis, e.g., 1889, p. 1889, p. 1889, A. Hydraulics of Dams from a Military Perspective, (Hydraulic Engineering: Saving a Threatened Resource-In Search of Solutions, Marshall Bennings, ed. and Nani G. Bhowmik, ed., 1992), p701-706
Reservoir System Reliability Constrained by Natural Salt Pollution, (Water Resource: Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with Awes S. Karama, p661-666

see Dunn. David D., (Water Resources Planning and Papages—In

S. Karama, pool-ood see Dunn, David D., (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p498-503

Wurjanto, Andojo see Kobayashi, Nobuhisa, WW July/Aug. 92, p368-386

Wyatt, Gary A.

see Balog, George G., (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p429-432

Wyland, Robert M.

Wysaaa, Robert Nr. Extremal Wave Statistics Using Three Hindcasts, with Edward B. Thornton, WW Jan./Feb. 91, p60-74 disc: Yean-Bin Lin and Chia-Chuen Kao, WW May/June 92, p321-322

Wyllie, Loring A., Jr.

Building Protection from Tunneling in Downtown Los
Angeles, (Excavation and Support for the Urban Infrastructure, T. D. O'Rourke, ed. and A. G. Hobelman,
ed., 1992), with John A. Dal Pino, p107-118

Wyman, Richard V.
see Kandalañ-Ladkany, Nadia, (High Level Radioactive
Waste Management, High Level Radioactive
Waste Management Program Committee, 1992),
p2260-2266

Xi, Zahan see Bank, Lawrence C., (Materials: Performance and Pre-vention of Desiciencies and Failures, Thomas D. White, ed., 1992), p618-631

Influence of ADAS Element Parameters on Building Seismic Response, with Robert D. Hanson, ST July 92, p1903-1918

Na, Renjie see Bhowmik, Nani G., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p666-671

Xie, Ming see Gerstle, Walter H., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p784-787

see Gerstle, Walter H., EM Feb. 92, p416-434

Xin, Dapeng
One-Dimensional Model for Analysis of CRC Pavement
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July/Aug. 92, p557-575

Xiong, Yihua Shortest Path Within Polygon and Best Path Around or through Barriers, with Jerry B. Schneider, UP June 92, p65-79

Xu, Cheagchao disc. (of Entropy-Based Redundancy Measures in Water-Distribution Networks, by Kofi Awamah, Ian Goulter and Suresh K. Bhatt, HY May 91, p595-614) with Paul W. Jowitt, HY July 92, p1064-1066

Xa, Hongbo
A Numerical Study of Kinematics of Nonlinear Water
Waves in Three Dimensions, (Civil Engineering in the
Oceans V, Robert T. Hudspeth, ed., 1992), with Dick
K. P. Yue, p81-98

Xu, K.
Effect of Active Control on Closely Spaced Natural Frequencies, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with P. Warnitchai and T. Igusa, p693-696
Modal Coupling Effect of Non-Classically Damping, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with T. Igusa, p453-456

Xu, Kangming
Nonstationary Response of Structures with Closely
Spaced Frequencies, with Takeru Igusa, EM July 92,

Xu, Xinyi see Dai, Dingzhong, WR May/June 92, p337-349

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Control of Along-Wind Response of Structures by Mas and Liquid Dampers, with B. Samali and K. C. S Kwok, EM Jan. 92, p20-39 err: EM Apr. 92, p851

Xue, G. L.

A Fast Algorithm for the Rectilinear Single Facility Loca-tion Problem, (Computing in Civil Engineering and Ge-ographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with J. B. Nosen, p1113-1120

Xue, Song-tao
Wave Attenuation in Viscoelastic Continuum with Fading Memory, with Jun Tobita, Tetsuya Hanzawa and
Masanori Izumi, EM Aug. 92, p1597-1611

Xue, Zhibuai

A Preliminary Evaluation of Transport Mechanisms for Multiple Substrates in a Laboratory Column System, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with William F. McTernan, p.180-185

Reuse and Treatment of Electrochemical Industrial Wastewater by Electrodialysis, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Zhongling Hua, Qi Li and Naiyi Yao, p376-381

ging rius, Qi Lau Naiyi 1 ao, p5/6-381

A Framework for the Documentation, Representation, and Processing of Design Standards, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodon, ed. and Jeff R. Wright, ed., 1992), with Kincho H. Law, p5/1-104

Yager, Robert E. see Craig, Paul M., (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), p61-71

Yager, Thomas J.
Studies Related to Aircraft/Runway Friction Performance, (International Air Transportation: A New International Airport, Robert E. Boyer, ed., 1992), p64-71

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Yakowitz, D. S.
A Decision Support System for Water Quality Modeling,
(Water Resources Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), with L. J. Lane, J. J. Stone,
P. Heilman and R. K. Reddy, p188-193

Yamaguchi, T. see Sakumoto, Y., ST Feb. 92, p392-407

Yamamoto, Brian S.
Robotics in SEI Terrestrial Launch Site Operations, (Engineering, Construction, and Operations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Miller, ed., 1992), with A. J. Mauceri and O. A. Chaikovsky, p1464-1474

Yamamoto, Yukinobu see Gwynne, Owen, (Engineering, Construction, and Op-erations in Space III, Willy Z. Sadeh, ed., Stein Sture, ed. and Russell J. Willer, ed., 1992), p89-99

Yamamuro, Jerry A.
The Effective Stress Path for Soil at High Pressure, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Poul V. Lade, p729-732

Yamani, Ahmed S. Shear Resistance Models for Concrete Bridges, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Andrzej S. Nowak, p809-

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Yamato, Alji
The High Level Radioactive Waste Management Program
in Japan, (High Level Radioactive Waste Management,
High Level Radioactive Waste Management Program
Committee, 1992), with Sumio Masuda and Hideki
Sakuma, p41-48

Yamazaki, Hiromichi Solubility of Uranyi in Brine, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Yassi-lios Symoopoulos, Bo Lagerman and Gregory R. Chop-pin, p1607-1611

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1992), p420-423
see Hackl, K., (Engineering Mechanics, Loren D. Lutes,

ackl, K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p664-667

Yang, David W.

Alternative Study for the Breakwater and Fishing Pier Rehabilitation at Playland Park, Rye, New York, (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), with Michael J. McCarthy, Edward J. Schmeltz, Joseph Bonasia and Ralph Butler, Jr., p632-645

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Yang, In Chemport Through Unsaturated Rock—Data from Two Test Holes, Yucca Mountain, Nevada, (High Level Radioactive Waste Management, High Level Ra-dioactive Waste Management Program Committee, 1992), p732-737

1992, pr. 25. 1992, pr. 25. 1992, pr. 25. 27. Assismic Hybrid Control of Nonlinear and Hysteretic Structures I, with Z. Li, A. Danielians and S. C. Liu, EM July 92, p. 1423-1440
Assismic Hybrid Control of Nonlinear and Hysteretic Structures II, with Z. Li, A. Danielians and S. C. Liu, EM July 92, p. 1441-1456
EM July 92, p. 1441-1456
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Control of Hysteretic System Using Velocity and Acceleration Feedbacks, with Z. Li and S. C. Liu, EM Nov. 92, p2227-2245

Stable Controllers for Instantaneous Optimal Control, with Z. Li and S. C. Liu, EM Aug. 92, p1612-1630

Structural Control Under Stochastic Seismic Loads, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with Z. Li and S. Vongchavalitkul, p828-831

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Yang, Pay-Jye see Chaturvedi, Shive K., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p1063-1066

Yang, Shih-An

bout Moving Contact Lines, with Allen T. Chwang, EM Apr. 92, p735-745

Yang, Wenxiong General Mechanism of Turbulence, (Engineering Me-chanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p397-400

Yang, Xiao-Liang Nonlinear Stability of Differential Surge Chambers, with Chen-Shan Kung, HY Nov. 92, p1526-1539

Yang, Yeong-Bin Frame Buckling Analysis with Full Consideration of Joint Compatibilities, with Shyh-Rong Kuo, EM May 92, p871-889

Yanmar, A. Melih Study of Time-Dependent Local Scour Around Bridge Piers, with H. Doğan Altınbilek, HY Oct. 91, p1247-1268

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Yao, G. C.

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Yso, J. T. P. Fect of Active Control to Structural Reliability, (Proba-bilistic Mechanics and Structural and Geotechnical Re-liability, Y. K. Lin, ed., 1992), with H. G. Natke, p373-

see Natke, H. G., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p676-680

Yao, James T. P.
Probabilistic Mechanics in Civil Engineering, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p42-50

Yao, Naiyi

see Xue, Zhihuai, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p376-381

Soil-Pile-Superstructure System in Liquefaction, (Piles Under Dynamic Loads, Shamsher Prakash, ed., 1992), with K. Kobayashi, p241-255

Yao, Timothy H.-J.

Time-Variant System Reliability Analysis Using Re-sponse Surface Methodology and Fast Integration, (Probabilistic Mechanics and Structural and Genechni-cal Reliability, Y. K. Lin, ed., 1992), with Y. K. Wen, p527-530

Yapa, Poojitha D.

Lagrangian Transport Simulation Using Video Images to
Store and Retrieve Parameters, (Estuarine and Coastal

Modeling, Malcolm L. Spaulding, ed., Keith Bedford,
ed., Alan Blumberg, ed., Raibh Cheng, ed. and Craig
Swanson, ed., 1992), with Jay B. Perry, p13-25

see Weerasuriya, Sujeeva A., (Hydraulic Engineering Saving a Threatened Resource—In Search of Solu-tions, Marshall Jennings, ed. and Nani G Bhowmik, ed., 1992), p102-107

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see Brown, Russ T., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p507-513

, M. R.

see McCavitt, N., TE July/Aug. 92, p540-556

Damage Mechanics Modeling of the Cyclic Behavior of Plain Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p377-

Yazıcıgil, Hasa

Optimal Capacity Expansion in Multi-Aquifer Systems, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamoux, ed., 1992), p432-438

See Shiao, Ming, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1136-1141

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Yegian, M. K.

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clo: GT June 92, p973

Alice for Kettleman Hills Waste Landfill Slope Failure. I:

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Seismic Response Variability of Soil Sites, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with M. S. Rahman, p392-395

Shoreline Profile of Stokes-Mode Edge Waves, WW Jan./ Feb. 92, p112-116

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Application of EPS for Slide Correction, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with John B. Gilmore, pl444-1456

Yeh, William W. -G.

Systems Analysis in Ground-Water Planning and Man-agement, WR May/June 92, p224-237

Yeh, William W.-G.

Optimization of Real-Time Hydrothermal System Opera-tion, with Leonard Becker, Shi-Qian Hua, De-Pu Wen and Jian-Min Liu, WR Nov./Dec. 92, p636-653

Yeh, William W-G

see Diba, Ali, (Water Resources Planning and Manage ment: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992 p316-321

see Helweg, Otto J., (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), p3-7 see Hsu, Nien-Sheng, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p598-603

see Maddock, Tom, III., (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Mar-shall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p1242

Yeh, Yi-Cherng Building KBES for Diagnosing PC Pile With Inductive Learning, with Yau-Hwaug Kuo and D. S. Hsu, CP Apr. 92, p200-219

Yen, Ben Chie

Yes, See Case Dimensionally Homogeneous Manning's Formula, HY Sept. 92, pl 326-1332 Simulation of Runoff and Infiltration of Disturbed Land, (Irrigation and Drainage: Saving a Threatened Resource—In Search of Solutions, Ted Engman, ed., 1992), with Robert Riggins, p401-406

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See Fisher, John W., S. Lee, S. L., S

Yen, Chieh-Cheng J.

Nowcast Protocol for the Great Lakes Forecasting System, (Estuarine and Coastal Modeling, Malcolm L.

Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed.,
Ralph Cheng, ed. and Craig Swanson, ed., 1992, with

Keith W. Bedford and David J. Schwab, p140-148

Yen, Chin-lien Aggradation-Degradation Process in Alluvial Channels, with Shou-young Chang and Hong-Yuan Lee, HY Dec. 92, p1651-1669

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Yeung, Albert T.
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see Ma, Max Y., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p721-724

Yeung, Man-chu Ronald
Use of Shi's Discontinuous Deformation Analysis on Rock Slope Problems, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Richard E. Goodman, p461-478

Yfantis, E. A.
Theory of Chaos and Radionuclide Distribution, (High
Level Radioactive Waste Management, High Level Radioactive Waste Management Committee,
1992), with G. Miel and G. M. Gallitano, p2339-2343

Yhdego, Michael Pilot Waste-Stabilization Pond in Tanzania, EE Mar./ Apr. 92, p286-296

Yim, Solomon C. S. Nonlinear Impact and Chaotic Response of Slender Rocking Objects, with Huan Lin, EM Sept. 91, p2079-

disc: W. J. Stronge, EM Nov. 92, p2332-2333 clo: EM Nov. 92, p2333-2334

Fig. Au-Yeung
Environmental Management Issues in Developing Countries of Southeast Asia, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992), p631-635

Yin, Wan-Lee

Variational Solutions of the Von Karman Plate Theory Based on a Mixed Formulation, (Engineering Mechan-ics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p656-659

Routes to Chaos of a Vertically Rotating Pendulum, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with F. DiMaggio, p672-675

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Evaluation of Dewatering and Treatment System at the Chisman Creek Superfund Site, (Environmental Engineering: Saving a Threatment Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Dennis W. Okorn and Burton M. Marshall, p.250-251.

Yoe, Charles

Quantitative Risk Assessment and Technology Transfer: Software Developments, (Risk-Based Decision Making in Water Resources V, Yacov Y. Haimes, ed., David A. Moser, ed. and Eugene Z. Stakhiv, ed., 1992), p92-107

Yoganathan, Ajit P.
see Ha, Belinda, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p836-839
see Lefebvre, Xavier P., (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p701-704

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Yonekura, Ryozo
Current Chemical Grout Engineering in Japan, (Grouting, Soil Improvement and Geosynthetics, Roy H. Borden, ed., Robert O. Holtz, ed. and Ilan Juran, ed., 1992), with Munchiko Kaga, p725-736

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Yong, K. Y. see Chow, Y. K., GT Aug. 92, p1141-1157

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Yong, Raymond N. see Mohamed, Abdel-Mohsen O., (Environmental Engi-neering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), p457-462

Yong, Y.
Surface Motion Due to Stochastic Plane Sources in a Layered Medium, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with J. Yu, p184-187

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Yoon, J. Y.

Computation of Flow in Ice-Covered Dune-Bed Chan-nels, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with V. C. Patel and R. Ettema, p385-388

see Scott, D. W., (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), p572-576

Yoshida, Nobuyuki

FE Analysis of Time-Dependent Instability of Cut Slopes in Clay Shale, (Stability and Performance of Slopes and Embankments II, Raymond B. Seed, ed. and Ross W. Boulanger, ed., 1992), with Toshihisa Adachi, p429-444

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Yoshikawa, Nobuhiro

Stochastic Finite Element Analysis of a Damped Beam on Random Foundation and Subjected to Fast Moving Loads, (Probabilistic Mechanics and Structural and Ge-otechnical Reliability, Y. K. Lin, ed., 1992), with Shi-geru Nakagiri and Ladislaw Fryba, p328-331

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see Atsunori, Miyamura, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p559-562

You, Kwang-W.

A Three-Dimensional Simulation of Buoyancy and Wind-Induced Circulation and Mixing in the New York Bight, (Estuarine and Coastal Modeling, Malcolm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swanson, ed., 1992), with Lie-Yauw Oey, Yan-H. Zhang, Ping Chen, H.-T. Jo, James Manning, Richard Patchen and James Herring, p453-465

see Chen, Ping, (Estuarine and Coastal Modeling, Mal-colm L. Spaulding, ed., Keith Bedford, ed., Alan Blumberg, ed., Ralph Cheng, ed. and Craig Swan-son, ed., 1992), p175-187

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Young, G. Kenneth

Young, G. Remerts
Risk-Costs for Scour at Unknown Bridge Foundations,
(Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Stuart M. Stein and Roy Trent, p1106-1111

Young, J. Francis
The Microstructure of Hardened Cement Paste and Concrete, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), p737-739

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see Glimpse, Steven B., (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), p818-824

Young, M. Anthony

see Shelden, Jeffrey G., (Coastal Engineering Practice '92, Steven A. Hughes, ed., 1992), p537-553

Young, Ronald E.

Tomag, Norther E. Reclaimed Water, Irrigation, and Conservation Pricing, (Water Resources Planning and Management: Saving a Threatened Resource—In Search of Solutions, Moham-mad Karamouz, ed., 1992), p161-162

Youngs, R. R.

see Coppersmith, K. J., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p1142-1150

Younker, Jean L.

Tomacer, Jean L.

Early Evaluation of the Suitability of the Yucca Mountain Site, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Larry D. Rickertsen and Bruce R. Judd, p517-524

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Yourman, Allen M., Jr.

Measured Fill Performance at Berths 212-215 in the Port of Los Angeles, (Ports '92, David Torseth, ed., 1992), with Matthew F. Hunter and Gerald M. Diaz, p376-

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see Safayeni, F., ME Oct. 92, p346-361

18. Insoluting Inflation Instability of Cylindrical Membranes, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with William A. Nash and Thomas J. Lardner, p916-919

Ya, Christopher H.

Determining Velocity Gradient in a Flocculation
Basin—A Case Study, (Environmental Engineering:
Saving a Threatened Resource—In Search of Solutions,
F. Pierce Linaweaver, ed., 1992), p933-598

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Proposed Similarity Law for Surface Velocity in Hydraulic Models, with Weijun Zhao, HY Sept. 92, p1318-

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see Yong, Y., (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), p184-187

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see Kassar, M., ST Nov. 92, p3136-3150 see Kassar, M., ST Nov. 92, p3151-3168

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Yuan, Fuh-Gwo Improved Rectangular Element for Shear Deformable Plates, with Robert E. Miller, EM Feb. 92, p312-328

Aumn, Webbo

An Integrated Expert System for Operating a Petroleum Refinery Activated Sludge Process, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with Michael K. Stenstrom, Naci H. Ozgur and David Okrent, p480-485

Yuan, X.

Random Initial Heterogeneity and Degradation in Brittle Materials, (Engineering Mechanics, Loren D. Lutes, ed. and John M. Niedzwecki, ed., 1992), with F. F. Tang and G. Frantziskonis, p616-619

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Yuan, Zehong Exact Formulation of Axisymmetric-Interface-Element Stiffness Matrix, with Koon Meng Chua, GT Aug. 92, p1264-1271

Yucel, Oner

BRSC—A Spreadsheet Program for Bridge Scour Sensitivity Analysis, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p906 911

Jean Storms for Emergency Spillways of SWM Ponds, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), p934-939
 OUTFL—A Spreadsheet for Design of Adequate Storm Drainage Outfalls, (Hydraulic Engineering: Saving a Threatened Resource—In Search of Solutions, Marshall Jennings, ed. and Nani G. Bhowmik, ed., 1992), with Edward L. Lowman, p707-712
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 Sensitivity of Non-Point Source Pollution Controls to Land Use, (Environmental Engineering: Saving a Threatened Resource—In Search of Solutions, F. Pierce Linaweaver, ed., 1992), with David W. Blaha, p358-363

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Yue, Yading
Dynamic Elastic-Plastic Buckling Behavior Illustrated by
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Yun, C.-B.

Parameter Estimations of Structural Dynamic Systems, (Probabilistic Mechanics and Structural and Geotechnical Reliability, Y. K. Lin, ed., 1992), with C.-G. Lee and H.-J. Lee, p212-215

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Zablerek, Peter M.
Defining Traffic Impacts of Redevelopment, (Site Impact
Traffic Assessment: Problems and Solutions, Robert E.
Paaswell, ed., Nagui Rouphail, ed. and T. C. Sutaria,
ed., 1992), p195-199

Zabransky, David K.

The ACR Issue Resolution Process, (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), with Michael S. Alissi and Michael H. Schwartz, p173-177

Zacing, John
Principles of Infrared Thermography and Application for Assessment of the Deterioration of the Bridge Deck at the "Zoo Interchange", (Materials: Performance and Prevention of Deficiencies and Failures, Thomas D. White, ed., 1992), with Tarun R. Naik, p107-115

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Zack, James G., Jr. Schedule "Games" People Play, and Some Suggested "Remedies", ME Apr. 92, p138-152

Zaghloul, Huny H.

Army Water Supply Management System for Installations Drinking Water Facilities, (Computing in Civil Engineering and Geographic Information Systems Symposium, Barry J. Goodno, ed. and Jeff R. Wright, ed., 1992), with Fadi A. Karaa, Jocelyn Clark and Matthew 1774), with Paul A. Karaa, Jocelyn Clark and Matthew Korfist, p145-152
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Management of Portland's Combined Sewer System,
(Water Resource Planning and Management: Saving a
Threatened Resource—In Search of Solutions, Mohammad Karamouz, ed., 1992, with Lester E. Lee and Gordon A. Nicholson, p468-473

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aus., N.

. N.

amaa, N. re Gattis, J. L., (Site Impact Traffic Assessment: Problems and Solutions, Robert E. Paaswell, ed., Nagur Rouphail, ed. and T. C. Sutaria, ed., 1992), p16-20

see Ritter, J. A., (High Level Radioactive Waste Management, High Level Radioactive Waste Management Program Committee, 1992), p549-556

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Intersection Air Quality Analysis, (Transportation Plan-ning and Air Quality, Roger L. Wayson, ed., 1992), with Robert Conway and Stephen S. Rosen, p283-297

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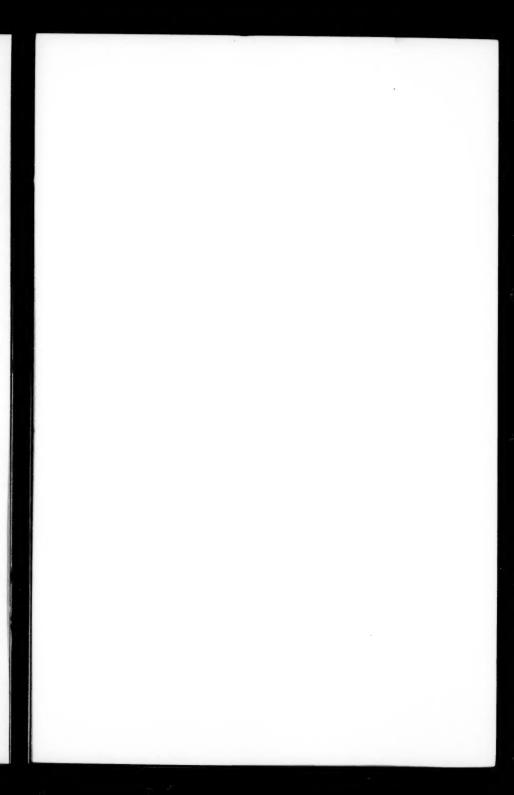
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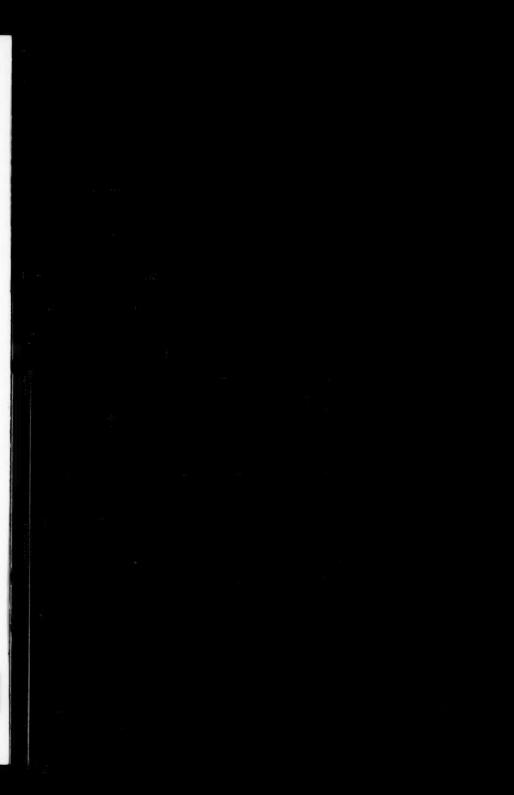
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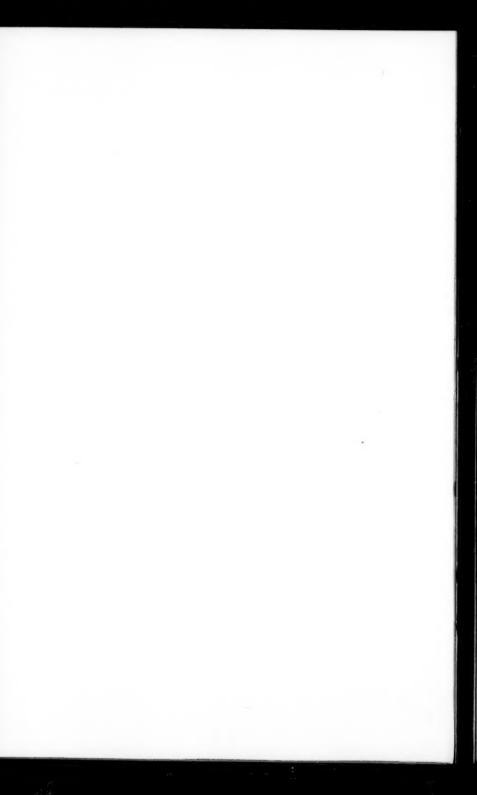






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